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METEOROLOGICAL OBSERVATIONS,

MADE AT THE ROCHESTER COLLEGIATE INSTITUTE BY L. WETHERELL, JULY, 1842.

Date.	Thermometer. Sunrise.	1 o'clock, P. M.	1 h. af. sunset.	Mean.	Winds. A. M.	Winds. P. M.	Weather. A. M.	Weather. P. M.	Rain Gage
26	63	82	63	68.66	N	N	cl'dy	sh'w	.15
27	59	66	62	61.66	N	vari.	sh'w	sh'w	.12
28	57	76	66	65 66	W	N W	cl'dy	rain	
29	53	72	59	61.66	W	N	fair	fair	08
30	55	86	70	72 33	S W	E W	cl'dy	sh'w	.28
1	67	68	59	63.16	N	N E	cl'dy	rain	
2	58	75	61	65.	E	W	rain	fair	.71
3	60	81	64	68.83	S W	S W	fair	rain	
4	63	78	60	67 16	W	W	fair	fair	.07
5	64	65	60	61.33	S	W	rain	rain	.16
6	54	63	52	55	N	N W	cl'dy	fair	
7	46	72	57	60 33	S W	S W	fair	fair	
8	58	77	68	67 33	S	S W	cl'dy	rain	.60
9	56	65	58	60.	W	N W	rain	fair	.72
10	58	71	58	60.33	W	N	fair	fair	
11	52	75	62	64.	N W	N	fair	fair	
12	58	83	68	70.83	S W	N	fair	fair	
13	65	87	72	74 66	S W	N E	fair	fair	
14	65	72	63	65.83	N W	N W	cl'dy	fair	
15	60	71	58	62 5	N	N W	fair	fair	
16	57	78	70	69 83	N W	N	fair	fair	
17	66	86	70	74.	N W	W	fair	fair	
18	66	88	72	76.	S W	N W	fair	fair	
19	70	91	70	75.33	S W	N W	fair	fair	
20	60	68	59	61.16	N	N W	fair	fair	
21	53	74	59	62.5	S W	N W	fair	fair	
22	56	84	70	71.5	S	N W	fair	fair	
23	65	89	74	77.16	S W	W	fair	fair	
24	72	76	66	68.66	S W	N W	sh'w	fair	.23
25	56	72	58	62.66	N W	N	fair	cl'dy	

Range of thermometer for the month, 45 degrees.
Mean temperature of June 1842, 60-66 "
" " " 1841, 67.62 "
" " " 1840, 63.81 "

Rain Gunge, June 26, to July 25, 1842, 3.12 inches.
" " " " 1841, 2.77 "
" " " " 1840, 3.55 "

Remarks on the weather and progress of vegetation, commencing June 26th and ending July 25th.

June 26th, shower at 2 o'clock, P. M., with thunder and wind; 27th, thunder this morning at 6; 28th, thunder showers in the evening: 30th, showers with thunder at 5 o'clock, P, M.

July, the seventh month of the year, so called from *Julius*, the surname of Caius Cesar, who was born in this month. Before that time, this month was called *Quintilis*, or the fifth month from March.

July 1st, rain; 2d, rain in the forenoon, clear in the afternoon; 3d, a shower with thunder at 6, P. M., Aurora Borealis this evening; 4th, fair; river high; 7th, farmers have commenced haying; 8th, thunder showers at 1 and 2½ o'clock, P. M.; 9th, very rainy last night; clears off this afternoon; 14th, a little sprinkle; no rain from the 15th to the 24th; 24th, thunder showers in the morning.

Corn is small, but has grown very fast for the last 10 days; corn in silk the 16th; last year it was in silk much earlier. Farmers commenced harvesting about the 20th; green corn in market last year the 16th of July. Whortleberries were in market the 13th. Chestnut trees in blossom the 5th. Tomatoes were ripe the 26th. I have seen no green corn, nor whortleberries, nor tomatoes in market yet.

Chestnut trees in blossom the 20th, much later than last year.

Note.—Venus is now the evening star, and may be seen in the west a little after sunset. Jupiter and Saturn may also be seen; they come to the meridian about 11 o'clock in the evening. Jupiter shines with a white light and is very brilliant. Saturn is of a dim reddish color and comes to the meridian a little before Jupiter.

Royal Agricultural Society of England.

"At a meeting of the Royal Agricultural Society of England, on the 18th of May, in London, on motion of the Duke of Richmond, seconded by Earl Spencer, Prof. Justus Liebig of Giessen, Germany, and Mr. Henry Colman, Agricultural Commissioner of Massachusetts, were unanimously elected honorary members of this Society."

Mr. Colman gratefully appreciates this distinguished honor; an honor much higher than any to which his ambition had ever aspired; and the more highly valued on account of the eminent friends of agriculture at whose instance it has been conferred. Viewed aright, it can serve only as a new stimulus to render oneself deserving of it; and quicken efforts, however humble, to be useful in a cause deeply and inseperably connected with the physical comfort and the moral welfare of mankind.

Agricultural Papers.

In noticing the American Agriculturist in our last number, by an inadvertence we stated that each number consisted of 16 pages. We should have said 32 pages imperial octavo. We are happy to make the correction, as it gives us another opportunity of commending to our readers a publication ably conducted and promising much advantage to the agricultural community. It is published monthly by Geo. A. Peters, New York, and edited jointly by A. B. & R. L. Allen; price one dollar per year.

The cheapness of agricultural publications is a remarkable feature of the times. The American Farmer, the agricultural pioneer, was published at Baltimore for five dollars per year and liberally sustained. Now a New York Farmer, without going out of the State, to which, we hope he will not confine himself, may have the Albany Cultivator, one of the best papers ever printed, the American Agriculturist as above, the instructive Central Farmer from Rome, and our own humble sheet, which we do our best to make useful, for three dollars per year. To these he may add the excellent and highly useful paper the Northern Light, printed at Albany monthly, and United States Farmers' Journal, printed in New York city, under the able and experienced supervision of Fleet & Blydenburgh, for a trifle more. Few New York farmers, who have a hundred acres of land, are excusable if they do not take all of them; and if they cannot read them themselves, circulate them among their neighbors, in the public schools and reading rooms. How can they do a better service for the cost? Yet strange to say there are many who will not aid us at all; and there are others who threaten to withdraw their patronage, if we happen to differ from them in opinion. There are too, some patterns of liberality and justice, who want to beat us down from 50 to 25 cents. Exquisite magnanimity! men, a million of whose souls could make together a somerset through the eye of a fine cambric needle without bruising or jostling or crowding. Out upon such meanness! We remember one day, in Boston market, buying of a farmer, who had come two hundred miles, some lump butter as fine as could be made, when one of these folks came up to inquire the price. The current price at the time was from 17 to 20 cents. The reply of the farmer was 12½ cents. Why, said the man, wishing to "beat him down," don't you think that's high? We could not restrain our indignation.—"Throw it at him! throw it at him!" said we, "such a fellow ought to have his bread spread with wheel-grease."

A Liberal and Useful Movement.

The Livingston County Agricultural Society have offered 20 vols, of the Cultivator and 20 do. of the New Genesee Farmer, to be given as gratuitous premiums to the deserving. Allow us to say this is highly creditable to their good judgment. If we recollect aright, the Rhode Island Society for the encouragement of Agriculture and Manufactures, have been accustomed for years to take fifty copies of the New England Farmer for this purpose.

Important Notice.

There is a large amount due us from Post Masters and Agents in the Western States and elsewhere, mostly in small sums it is true, but our whole resources depend on such small sums, and therefore we hope no one will delay sending on that account.

☞ *One word to our friends.*—We have a large supply of back numbers of the current volume on hand, which ought to be in the hands of subscribers. Will you not help us—would you not be doing your neighbors as well as ourselves a real kindness, by soliciting them to subscribe? The currency is now considerably improved, and bills of most of the states will answer for remittances PUBLISHERS.

The Stupendous Temperance Reform.—Such is the progress of this reform that the most credulous and enthusiastic laborer in the cause, has been struck dumb by its all-sweeping progress; while the more sceptical looker on, is heard to exclaim, that God is performing a miracle for the cleansing of a leperous generation. S. W.

Scientific Agriculture.--Letter V.

MANURES.—URATES; POUDRETTE; GUANO.

One of my chief designs in these letters is to endeavor to elevate the mind of the agriculturist, by bringing him constantly and repeatedly in contact with the higher branches of the pursuit he follows. The names Oxygen, Hydrogen, Nitrogen, &c., may appear at first puzzling to him, but by frequent collision with them, and by the persuasion that they represent substances as distinct, although not quite so tangible, as his own plough or harrow, this appearance will wear off, and he will be gradually brought to pay attention to their operations. When he becomes convinced that the ammonia of his dung heap is its most valuable part, he will exert himself to economise and save it in every possible way. When, by practice and experiment on his own farm, he becomes intimately acquainted with the powers *on his own soil* of the different artificial manures, of nitrate of soda, of Guano, or of the composts under various names now regularly offered for sale as manures in this and other countries, then will he discover the great value of the study of those principles and laws, which, always found to be simplest when best understood, nature has wisely ordained for the regulation and connection of the animal and the vegetable kingdom; a kingdom in the midst of which the farmer passes his whole existence, and in whom, therefore, an ignorance of these laws is only to be excused by want of the means of obtaining a knowledge of them. I will then, at the risk of repetition, and in order more clearly to elucidate what follows, recall a few facts and principles already set forth in these letters, and which cannot become too familiar to every one connected with agriculture. They are that vegetation is chiefly composed of carbon, oxygen, hydrogen and azote or nitrogen, and that this latter substance is principally useful in promoting the digestion of the food absorbed by the vegetable, or in other words of converting this food into its substance and juices; assimilation, as it is most properly called; hence that if a vegetable absorbs more food than it can procure nitrogen to assimilate, all such superabundance is worse than useless, it is injurious. From this it will be seen that during the whole time a plant is growing, (which is this action of assimilation) until the formation of the flower and the fruit, it is necessary that azote should be supplied just as fast as, and for economy not faster than it absorbs its food; that the more of this food is healthily digested or assimilated by means of azote, the larger will be all the parts of the plant, and the greater will be the quantities of saccharine and other juices stored up in the stems, roots, &c., for conversion into flower and fruit, and the larger and finer of course will this flower and fruit be, provided the necessary heat and sun light to ripen these juices be present, and the requisite arrestation of growth of stem and foliage take place as prescribed by nature previous to the formation of these products.

This statement renders quite clear the importance of a constant and abundant supply of azote to vegetation, and will therefore shew the value of urine as a manure. Urine is composed chiefly of Urea with a few extremely useful salts, as sulphate and nitrate of potash, common salt, phosphate and acetate of soda, a little phosphate of lime, and a little muriate and urate of ammonia.

Urea, the chief ingredient of which is uric acid, contains in 60 parts, 12 of Carbon,
28 of Nitrogen,
4 of Hydrogen,
19 of Oxygen,

60

Uric acid contains in 100 parts
36.11 of Carbon,
33.36 of Nitrogen,
2.34 of Hydrogen,
28.19 of Oxygen.

100

This uric acid combines with various alkaline bases, such as ammonia, soda, potash, &c., and forms salts called urates, thus urate of ammonia, urate of potash, &c. Now one great feature of these urates is their slow solubility in cold water, although some of them particularly urate of ammonia, is very readily soluble in hot water; this is as though nature had said in stamping them with this property, "You are required to supply digestive powers to vegetation, and your quality must be to dissolve only just as fast as you are wanted." We shall see hereafter the value of Silex, Lime, Potash, Soda, &c., with their different salts; on these much discussion does and always will exist; they are all good applications when the soil does not already contain a sufficient quantity of them; but no discussion ever arises respecting animal manure containing nitrogen, no farmer, whatever may be the quality of his soil, ever doubts the value of this—on this the only discussion which arises is as to its economical application. In our Chemical Laboratories by the application of fierce fires, of concentrated acids and alkalies, we can analyze various substances and exhibit to our limited senses their constituent parts, and in many cases we can gain some knowledge of their properties; but nature does not act thus, yet she analyses and separates the same ingredients, by action on infinitely minute particles, such as are entirely invisible to our most powerful microscopic efforts. We analyze for exhibition, she for use. She analyses or forms combinations and again separates these into their original particles, just as they are wanted by the animal or the vegetable creation, but of her methods of so doing we are at present profoundly ignorant; our chief exertions must be confined to observe her operations and afford ample ingredients for carrying them on. Thus soon after animal urine is voided it begins to ferment; urea and urates are formed; these, applied to the soil, are acted upon by plants, and their constituent parts, nitrogen, oxygen, &c., with their alkaline bases, are separated by them for their growth. The immense value of this material is therefore quite evident, as is also the folly of wasting it. The great practical knowledge now required, is to find the best way of preserving its virtues until wanted for use, and the quantities in which to apply it with the utmost economy and advantage on soils variously constituted. Much experiment is still needed to advance the present infancy of this great practical study. There is a substance existing in immense beds of 60 to 100 feet in thickness on the coast of Peru, called Guano, pronounced something like Huano, with which the people of that country have time out of mind manured their almost barren, sandy soil, and by the help of which they have raised good crops of corn. The recent application of science to agriculture, has caused this substance to undergo investigation for the purpose of ascertaining its value as a manure. Amongst much other valuable information contained in a recent publication of Dr. Dana, of Lowell, may be found the latest and most correct analysis of Guano by Voelckel. It contains in round numbers,

About 31 per cent of ammoniacal salts, (amongst them urate of ammonia.)

About 14 per cent of phosphate of lime, the chief ingredient of bone dust.

About 31 per cent of organic substances, such as will form humus or geine.

About 20 per cent of salts of soda, potash, magnesia and lime.

About 4 per cent of sand and clay.

So that according to our present knowledge, it would hardly be possible to concoct a compound of greater apparent power on vegetation. Its operations have consequently been found so valuable in England, that about 60 vessels are now employed in removing it there from Peru, and it has taken its place in the price currents of that country as an article of standard value. The London price current of the 24th May, observes, "Guano is now dull of sale, though offered at the reduced price of £15 to £16 sterling, about $60 to $64 per ton" of 2240 lbs., it used to sell for about $80. Notwithstanding its immense quantity, it can hardly be any thing else but the excrements of birds, urates never having been found naturally formed, except in animal excrement. It will be observed to contain many of the ingredients of urine. I am not aware that any experiments have been yet made on this substance in this country, but having, by the kindness of a friend, received about a pint of it, just arrived here direct from the coast of Peru, I have applied it to different plants in quantities varying from one sixtieth to one hundredth part of the soil. Two or three plants of delicate habits to which the smallest quantity has been applied, have in 14 days been killed by its too great power; other plants of more robust habit, are evidently getting of a deeper green color in their leaves—all have been most copiously supplied with water. Dr. Lindley, in the London Gardeners' Gazette, states that not much is yet known there on the subject, but advises trials to be made by solutions of it in water; this method, however, is evidently inapplicable to large agricultural operations, besides it is dissolving out the soluble salts and applying them alone by themselves—whereas by intimately mixing with the earth and copiously watering, the roots can act on the substance in the way most congenial to their nature, and the salts are also dissolved. The best way, probably of using it on a large scale, would be either by mixing it thinly spread throughout the manure heap, or strewing it scantily over the ground previous to ploughing. From its intense smell and appearance, it must be a very strong manure, but to what vegetation it will be most advantageous, and how best applied, will require some experience to decide upon. Other artificial manures called Poudrettes, are now commonly known here; they are or ought to be chiefly compounded of night soil with or without animal offal, prepared so as to retain the ammonia, which, although not the only, is yet the chief valuable ingredient. It is obvious that its effects will depend on the proper preparation which it undergoes and on its freedom from adulteration of other substances of little value as manure.

Nitrate of soda, with several other salts of importance in commerce, are found in large quantities in the province of Tarapaca, Peru, where it never rains.—This district has been visited by Mr. Blake of this city, and much valuable intelligence obtained. Dr. Daubany, well known in England for the unremitted application of his scientific attainments to the promotion of agriculture, is about quitting England for the purpose of visiting this spot; so that agriculturists may perceive that scientific persons are every where bending all their energies towards the improvement of the cultivation of the soil: it behoves them, therefore, not to be behind hand in endeavoring to second, by their practical experiment, the efforts of these worthy co-laborers.

J. E. T.

Boston, July, 1842.

Additional on Daniels' Patent Manure.

In my last letter I gave you my ideas respecting Mr. Daniels' new manure; since then, I have received the specification of the patent; here it is a little abbreviated.

The substances are divided into three classes:

First: Ligneous matters, (say sawdust of any wood) also peat, straw, and weeds of any kind.

Second: Bituminous matterr; these are, mineral coal, (not anthracite, I am sure, although this is not so

stated,) asphaltum, pitch made from coal tar or other pitch, mineral resin, and also tar.

Third: Animal matter, such as butchers offal, graves, flesh of any dead animals, also fish.

The ligneous matters are ground to powder—or the same effect may be produced on them by mixture with caustic (unslacked) lime.

The bituminous matters, when brittle, are ground into powder by machinery; but if sticky like pitch, a small quantity of dry quicklime is added to prevent their sticking to the machine. When these bituminous ingredients are liquid, they are converted into vapour by dry distillation, with which vapor the ligneous matters are saturated. These ligneous matters may be, spent tanners' bark, dyers' spent wood, sawdust, &c. The soft bituminous matters may also be reduced to a state of minute division, by being rendered soluble in water by the addition of caustic alkali—and in this solution the ligneous matters are steeped.

The animal matters are mixed with pulverised ligneous or bituminous ingredients before mentioned, and are then ground into fine powder.

This manure is deposited in the ground with the seed by means of a drilling machine, or scattered over the ground broadcast.

The words within brackets are my additions.

It will be immediately perceived that the particulars given in this patent are calculated more to conceal than to disclose the real method of concocting this manure. Still, as the patent right would be vitiated unless all the ingredients were mentioned, there is no doubt that every substance used is given, and that the sulphur, of which I did not see the use, is not amongst them.

There are two ways in which this preparation may be made. The bituminous matters, any or all, may be dry distilled, that is, inclosed in an iron retort and acted on by fire, the ligneous substances exposed to the vapour proceeding from this distillation, and thoroughly saturated with it. Coal gas, for illuminating cities, is produced by dry distillation of bituminous coal. This method, however, would require a regular manufacturing establishment with proper machinery.

When peat, weeds, &c., are used, then, with the tar and liquid bituminous matters, they may be operated on by quicklime, and sawdust added,—either of these mixtures, with finely divided animal matters, would no doubt make a rich manure. The principles of the formation of this new manure of Daniels', seem to agree pretty well with those I have laid down—namely, that all ligneous matters containing the basis humus or geine, a source of carbonic acid gas, well saturated with azote, particularly in the form of ammonia, and mixed with alkaline bases, as lime, potash, or soda, are highly important manures, particularly on light sandy soils; and that animal and carbonaceous matters are excellent ingredients to produce this saturation of azote.

Also, as a general rule, that whenever any rich manure, as cow or horse dung, is put on a hill on which plants are to be set, it is an excellent plan to mix a little quick lime with it before covering up. The lime liberates the ammonia, with which the earth around becomes impregnated, and the roots then find their proper food with its digestive power ready for them in abundance. The only precautions necessary, are to guard against the lime coming into contact with the roots, and also to cover up carefully, so that none of the ammonia may escape into the atmosphere.

J. E. T.

Reuben Miner, of Peacham, Vt., has this year produced 612 lbs. of sugar from 80 trees. The sugar producers of Louisiana represented to the Committee on Manufactures, that they cannot produce sugar at less than 5¼ cents per pound. If true, the farmers of Vermont can compete with them at a profit.

From the (London) Mark Lane Express.

LIME.

There seems to be a growing difference of opinion as to the state in which lime should be applied to the soil. We have always been of opinion that lime, generally speaking, operates upon the soil in two ways, namely, chemically and mechanically; when it is merely to operate mechanically, as to lighten heavy clay soils, it is of no moment whether it be applied in a caustic state or not; but when intended to act chemically, we hold that it must be applied in a caustic state. We can speak of our own personal experience as to the practice over a very large district, many thousand acres of reclaimed land in the West of England, where lime was the article generally used in the first instance to stimulate the land to fertility. The lime is deposited on the land in heaps a perch apart each way, the heaps of course varying in size according to the quantity per acre intended to be applied, but ordinarily one bushel in each heap. It is then covered with a portion of the soil, and suffered to remain until it begins to slake into powder, and which of course varies in point of time according to the dryness or moisture of the weather; the heaps are then turned, and suffered again to stand until the small lumps remaining are slacked, when it is spread upon the soil whilst yet in a caustic state, and immediately well harrowed into the soil. That it is more effective in a caustic than in an effete state, has been frequently proved in cases where, from some cause, two or three rows in a field have been suffered to remain uncovered, and by being exposed to heavy rain, was run to mortar before spreading: in such cases the difference has been manifest in the crop. We know it is the practice in some districts to mix the lime with head lands, ditch scrapings, and any other mould that can be collected, in large heaps, turning it over, and in due time carting it on the land. The operation of the lime, however, in this mode, is precisely the same as in the mode first described, with this difference, that in the former method its immediate effect is on the soil of the field, in the latter on the soil collected in the heaps with which it is mixed. It has been said that, inasmuch as lime in a caustic state has been found not to be injurious to animal life, it therefore would produce no effect upon the soil; abstractly this may be true, but it is the application of moisture which causes it to operate on the soil, and were water applied in proper quantity, it would immediately become destructive to animal life. This subject is one of great importance to the farmer, and we would strongly recommend those who desire information upon it, to read a chapter on lime in a "Treatise on Manures, their nature, preparation, and application, by John Donaldson," just published by Baldwin, in which the question in all its bearings is treated in a clear, systematic, and practical manner. This chapter is forty pages in length, and forms the best essay on the subject with which we are acquainted, and such as we can with confidence recommend to our readers.

Use of Camels on the Western Prairies.

Mr. Editor—The writer of this is a native of Russia, and has spent many years of his life in that portion of the Empire which borders on the Ural and Volga Rivers, north of the Caspian Sea.

I have, during the last two years visited, many parts of the United States; lately I have been in Missouri, Iowa and Wisconsin, and during my journeyings have had the fact strongly impressed on my mind that the *Camel* would prove a most valuable animal for burden in those prairies, and especially for traversing the country west even of the States I mention, where water is sometimes not found for days.

Camels used only for voyaging, possess great speed, and in the unsettled country would be found good to carry mails and convey intelligence. Their speed is great, 120 miles being a common day's travel for speedy animals.

Some individuals have expressed to me doubts of their being useful in this latitude. I mention the place of my birth only to show the most doubting that, in a more rigorous clime, they are extensively used. The breeding of camels is not more expensive than horses.

You no doubt are informed with regard to this subject, and I am convinced can give to persons desirous of breeding the camel, valuable information through the medium of your journal. They (the camel) can be obtained on the Black Sea, and if Agricultural Societies would import a few pairs, they would confer a great advantage on this country.

From 600 to 1000 pounds, with a rider, is a common load for the camel; and the commonest herbage, even weeds and twigs, will suffice for their sustenance while enduring the severest labors.

I was advised by some gentlemen, to whom I casually mentioned this subject, to write to some editor of an agricultural paper of this matter, and being about to go to the east through Canada, have thought best to write to you from this place.

Yours, with respect,

H. BOHLIN.

Buffalo, July 6th, 1842.

The statements in the foregoing letter certainly deserve attention. The facts given in respect to the speed of the camel, their strength and capacity for burden, their endurance of fatigue, and the cheapness of their support, are well established. They are as susceptible of training as the horse. They are of a mild and peaceable disposition, and live to a great age. We had supposed that they could not endure our climate, but the statement of the writer of this letter shows that it is otherwise. That they would be useful on the prairies and in the long journeys now constantly undertaken in the vast and unsettled plains towards the Rocky Mountains, into Mexico, and other territories, now and likely to remain impenetrable by carriages, it would seem but reasonable to believe. On first reading this communication, we were disposed to regard it as mere matter of romance; but upon reflection we cannot but think it is worthy of consideration. The only great difficulty would be in first importing them. This has been done, however, in several instances; and with proper care and management, the race might, for any thing we can see, be as easily extended as the race of oxen or of horses.—*Ed.*

Native Silk.

The Cincinnati Gazette give the following statement of facts showing the progress of the silk business in this country, as indicated by the bounties annually paid in the several States:

"In Ohio the bounty paid to silk growers in

1839 was.....	.....$71 10
1841 was.....	.....2681 76

The whole amount of reeled silk produced last year is set down at 3000 pounds. In Massachusetts the bounty paid in

1836 was.....	.....$85 20
1839 was.....	.....439 99
1841 was.....	.....4675 10

In New York, the increase in the quantity of cocoons produced, has been very rapid, in 1840 being 2000 pounds, while in 1841 it was 6426 pounds.

In Pennsylvania, the bounty paid in

1840 was.....	.....$2101 80
1841 was.....	..... 4418 55

The Rev. Frederick A. Ross has probably raised more silk than any other person in the country. During the last year he sold 300 pounds of reeled silk in Burlington, N. J., for $1600. A silk filature has been recently established in Philadelphia."

Wool and Protection.

Your memorialists respectfully suggest, that the introduction of every yard of broadcloth into this country, is the introduction of two and a half pounds of wool into the country—and the introduction of every yard of beaver and pilot cloths is the introduction of from three to four pounds of wool into the country, and each such yard of cloth foregoes the income of an acre of land of the American farmer, and of course employs the acre of land of the foreigner.

As citizens of this great Republic, we are entitled to our own market; we are entitled to the cultivation of our own lands—to the employment of our own labor; these are not unreasonable privileges, and to deny them is to destroy the arts of peace and prosperity.—*Manufacturers' Memorial.*

On Daniels' Artificial Manure.

The subjoined communication refers to the remarks of our correspondent J. E. T. in our July number These remarks it will be seen are in some measure qualified in his communication of this month, made after having become more acquainted with the actual constituents of this celebrated manure. We give place to this communication from the highest authority, with great pleasure. Dr. Dana's valuable book, the Muck Manual, has not yet received that attention in our columns which is due, and which we design to give to it. This is owing to repeated disappointments in "promises to pay" on the part of our correspondents. In that book is illustrated more fully the "action of carbonic acid" upon silicates, which Dr. Dana refers to in this letter as of so great importance. We shall presently give his views of it more at large, leaving to others to determine how well they are founded.

Of this book, the Muck Manual for Farmers, by S. L. Dana, we find the subjoined notice in the July number of Silliman's Journal of Science, which we have no doubt is from the pen of Professor Hitchcock.

"In conclusion, we can cordially recommend this work to our agricultural friends for its practical character. It is not saying too much to assert, that Dr. Dana has done for the farmer in this treatise, what Dr. Bowditch did for the sailor when he published his Practical Navigator. In this respect this treatise contrasts strongly with such a work as that of Liebig on the Organic Chemistry of Agriculture, &c., which, notwithstanding its originality and the philosophical beauty of its theories, is apt to make the impression upon the farmer that he is not at present to expect much from agricultural chemistry but ingenious conjecture. We are sure that Dr. Dana's work will remove this impression, while on the other hand, the chemist will see in it evidence of the rapid advance of this science. Within two years, three able European chemists, Liebig, Daubeny and Johnson, have given to the world most mature and valuable treatises upon it; and now we have a cis-Atlantic effort, which will not suffer by a comparison with any other. Truly the genius of agrienlture may exult in the bright prospects that are opening before her."

DEAR SIR—The remarks of your correspondent J. E. T. on the "new manure," like all things from his highly gifted pen, are of great value. He does not, however, seem to go to the root of the matter. After showing the value of ammoniacal liquor from gass works, he supposes that the "new manure" may be an attempt to form a substance or mixture, which resembles pit-coal; that this evolves ammonia, by spontaneous decay, as coal does by dry distillation. This is his explanation of the action of the new manure. It is good as far as it goes; but attributes too much to ammonia. When we consider the very small proportion which nitrogen forms of the whole mass of vegetable matter, averaging about 0,173 of the whole mass of cultivated crops, seeds, roots, stalks, &c., when green, and that whatever may be that proportion, nitrogen forms only 14-17 of any portion of ammonia, the quantity of this element, formed by the proportion of the new manure said to be used, must be quite too small to exert such effects as are said to be produced by its use. The proportion of nitrogen in coal is rated too high by J. E. T. Dr. Thomson assigns, according to Henry and Ure, quite too small a portion of oxygen in coal, while his quantity of nitrogen, though estimated according to the best mode of analysis then in use, is much too high. It was probably a mixture of oxygen and nitrogen Later analyses, conducted on more refined principles by Richardson, give an average of nitrogen and oxygen, of 8.852 in caking, splent, cherry and cannel coal. What proportion these bear to each other, does not appear; but, since Liebig, deducing the composition of coal from woody fibre, by subtracting water, carbonic acid, and carburetted hydrogen, *excludes nitrogen from coal*, we may suppose that it does not amount to a much greater proportion than that actually formed by Dr. Schafhaeutl, in Welsh anthracite. The average of two samples affording of nitrogen only 0.962, or, in round numbers, one per cent. This analysis confirms what observation has long shown, that the burning of our anthracites, produces abundant ammoniacal salts. The remark of J. E. T., therefore, that anthracite contains no nitrogen, requires modification. Had not analysis detected nitrogen, we might have attributed (as no doubt it is, in part,) the formation of ammonia in this case, to the passage of moist air over the ignited carbon; a well known and abundant source of the formation of this alkali. It is a question whether the spontaneous decay of coal ever evolves ammonia. It is on this point that the explanation of J. E. T. rests, so far as bituminous substances forms part of Daniel's manure. Spontaneous decay is a very different process from dry distillation in a closed vessel. It is quite probable that the bitumen acts less than the sulphur. This last acts by gradually forming sulphates, and probbaly your correspondent is right in attributing very little to its effects. We have then, sawdust, alkali and lime for the active agents. The effects of the new manure are due to other causes: 1st. To the evolution of carbonic acid gas. 2d. To the alkali forming soluble geine, with the woody fibre, whose decay is hastened by the presence both of that alkali and of lime. The sawdust, contains all the elements of manure, organic and inorganic. Dry sawdust exposed to air, decays—carbonic acid, water and ammonia result. While it loses, thus 3 parts in 100 of carbon, it loses 12 parts of oxygen and hydrogen, as water; or loses altogether 15 parts. If the air is excluded, as in the present case, and moisture is present, then the water is decomposed and a larger portion of carbonic acid is formed. The loss of weight is now from 18 to 25 per cent, and the resulting mass is geine or humus This immediately combines with the alkali and abundance of soluble manure is formed. The small portion of fixed alkali here acts like ammonia in cow dung. The immediate effects of the "new manure" are due to the evolution of carbonic acid among the silicates of the soil. These are decomposed by it. Their alkali is let loose, and acts on insoluble geine in the soil; the phosphates, combined with the silicates, are set free. This action of carbonic acid upon silicates, has been quite overlooked. The necessity of forming it, *among* the silicates, where plants are sprouting and growing, is of the first importance. The function of carbonic acid is here of the highest order in vegetable growth and culture. It is the high function of fermenting manure. It must never be lost sight of. No matter how rich a soil may be, in geine, if that has lost the power of spontaneously and readily producing carbonic acid, it is is dead, barren—it must produce carbonic acid, not for the food of the plants, but to *decompose the silicates*. On this turns the theory of rotation of crops. I shall touch upon this hereafter. To the causes above referred, is to be attributed the effect of the new manure. I doubt not the same results would follow from alkali and sawdust only—the same results which follow from muck and alkali, a little quickened perhaps, by a more free production of carbonic acid. If so, we are taught an important and practical lesson. Saw dust, or fine woody fibre, is to be added to swamp muck and alkali. All this is to be learned by trial. Let it be tried.

In connection with this subject, this evolution of carbonic acid, I would suggest to J. E. T. whether his remark, that fat is useless among the offal of the slaughter house, may not lead to a waste of a very good manure.

Fat, &c., is useful in two ways: 1st. By exposure to air, it evolves much carbonic acid. 2d. During this process, it gives up its glycerine. This last is an organic product, highly soluble in water. To this fact, "spent ley" owes no small part of its good effects.

S. L. D.

Lowell, July, 1842.

Notice.

Professor Liebig has a new work in the press on Organic Chemistry and Physiology. It will be published simultaneously in this country under the care of Professor Webster, the able editor of Liebig's former work. The work has been translated by Professor Gregory, who expresses himself as follows in relation to it.

"In my opinion, this work will mark the commencement of a new era in physiology. In translating it, I have experienced the highest admiration of the profound sagacity which has enabled Liebig to erect so very beautiful a structure on the foundation of facts, which others had allowed to remain for so long utterly useless, and of the logical structure and extreme cogency of his arguments. There is hardly a point in physiology accessible to chemisty (I mean, of course, those on which experiments have been actually made) on which he has not, by the mere force of his intellect, thrown the brightest light. In short, we now feel that physiology has entered on the true path, and the results, before long, will, I prophesy, be altogether astonishing."

On the use of Salt for destroying Grubs.

We have much pleasure in submitting the subjoined communication to our readers. Its suggestions in regard to agricultural experiments are of the highest importance. Experience is the certain road to useful knowledge. Every farmer can afford to make experiments, if not on a large yet on a small scale; and experiments on a small scale may be equally conclusive and satisfactory as others. All that is wanted in these cases is exactness of observation in regard to all the circumstances under which the experiment is made its progress thoughout and its results. Every practical farmer is continually making experiments. His whole course of cultivation is to a degree, a course of experiments; here then let him carefully write its progress, its incidents and its results; and let him journalise them for his own benefit, and communicate them for the benefit of his neighbors.

The "Plough Boy" we have never seen. It is we believe the only agricultural publication of the State that we are not in possession of. We wish some friend would put us in the way of obtaining a copy; and we should certainly republish the communication referred to. Nor do we recollect Cartwright's communication on preventing the rust in wheat. To the concluding suggestion of our respected friend we must demur, as believing it wholly impracticable. At a convenient season we design to treat the whole subject of salt as a manure, a subject on which much has been written but little is determined. ED.

MR. HENRY COLMAN:—In your June number is a valuable communication relative to the efficacy of salt in destroying the grub. By way of confirming this information would it not be well to republish a communication made by Major Smith of Albany, upon this subject to the Plough Boy, as long ago as 1821. You will find it in the 2nd vol. 98th page.—I am induced to make this suggestion in consequence of our mutual friend H. D. Grove remarking to me that he had used the quantity per acre recommended by your correspondent, without complete success, if with any success at all—which according to Mr. Smith is quite impossible unless the salt is dissolved. My experience confirms the truth of Mr. Smith's statements—I have long since called the attention of the Cultivator to it as one of the most important communications that have been made to the farmers.

Dr. Harris, in his report on the insects of Massachusetts, has made mention of the value of salt water in removing those aphides that prey upon the roots of

plants—which confirms as far as it goes, the statement of Mr. Smith. The English periodicals contain numerous communications relative to the value of salt in destroying slugs, (snails?) and worms.—Grub worms I presume is meant. They also state that to insure success the weather and the land must be damp. Mr. Field (Cultivator, vol. 4, p 183) killed grubs by using beef brine.

Any farmer who has a quantity of old brine and a watering can may easily prove the truth or falsehood of these positions when the grubs appear next year.—It is very desirable that intelligent farmers would on some scale or other, no matter how small, settle the question experimentally—and forward the result to some agricultural journal so that from the number and variety of the communications something like certainty may be derived. It is to be regretted that the attention of intelligent farmers is not sufficiently concentrated upon the various topics of agricultural inquiry that are continal recurring. From the want of concert among them many a valuable suggestion is lost. Here is a communication from a most respectable and accurate man that has slumbered for twenty years, which would have been of incalculable value to the farmers if ten of them had during that long period stated its truth and published their experiments. It is true that with the generality of farmers their experiments are rather the result of accident than design; at least this has been the case. But as there is now a spirit of liberal inquiry aroused in the farming mind, can it not be directed in a good degree to the same channel by the agency of the agricultural editor? Will it not do for you to urge your correspondents, for example to put a good deal of salt, attic, as well as common, in their communications for some time to come, and thus furnish abundant data for settling the value of salt to the farmer both as a manure and a vermifuge.

Every year the wheat districts suffer to a greater or less extent from the ravages of rust, and yet it is rendered more than probable that the free use of salt as a manure prevents this terrible disaster. At all events the celebrated Dr. Cartwright ascertained that if one pint of salt be dissolved in eight pints of water and applied to rusted wheat at the rate of two hoghsheads to the acre, the rust entirely disappears in two or three days, leaving only a slight discoloration of the straw. Now will not the sowing of very fine salt upon rusted wheat when it is wet with dew or rain answer every purpose and save the farmer from heavy loss?

Yours most truly, J. B. NOTT.

Norman Vale, Guilderland, July 7, 1842.

Every thing connected with the great staple of Western New York is important, and therefore we subjoin the following communication published in the Maine Farmer of a late date. We do not feel authorised to decide upon its soundness, but submit it to the observing and experienced.

Advantages and Disadvantages of the Bald and Bearded varieties of Wheat.

Mr. Holmes:—As the farmers of Maine are at some loss as to which is the most profitable to raise, the bearded or bald varieties of wheat, I have thought that it would be beneficial to state the advantages and disadvantages of both, according to my experience.

Advantages of Bald Wheat.—The flour is whiter, makes more pounds of flour to the bushel, as the hull is thinner and there is less bran, packs closer in the bundle, and takes less room in the stack or barn. *The disadvantages are*, the liability to lodge or to be thrown down by storms and rains, rusts or blasts easier, or more likely to be rusted and blasted, takes longer to grow, does not ripen as early in the season, and must be mixed thinner in the paste before baking. The bread dries sooner after baking.

The advantages of Bearded Wheat, especially the Payson Williams Black Sea, are, stiffer straw, not as liable to be beat down by storms or to lodge on rich land, quick in its growth, ripens early, and will do to sow late, is seldom known to rust or blast, and probably bears more heads to the acre, though that is doubtful. It need not be mixed so thin in the paste before baking. *The disadvantages are*, yellow flour, thicker hull and consequently more bran. Does not make as many pounds of flour to the bushel.

Let it be remembered that all bald wheat makes white flour, all bearded wheat yellow flour.

Winthrop, May, 1842. E. W.

Seed Wheat.--Caution to Farmers.

The subjoined is a very important communication. Some years since, having taken great pains to get some celebrated wheat from a distinguished cultivator, we received a few bushels very much mixed with rye, oats, &c. We undertook to clean it by picking out with the hand all the "foul stuff." The undertaking was most tedious; and being obliged to leave home before it was finished, we left it in charge to a man in our employ. He being very impatient, and not destitute of that self-conceit of superior sagacity so common in such cases, immediately after we left, took the whole to the mill and passed it through the smut machine. The consequence was, its germinating power was destroyed, and with the exception of a very few straggling plants, we lost our seed and our labor; to say nothing about our temper.—*Ed.*

Mr. Colman.—Through the medium of your paper I wish to caution the farmers of Western New York against sowing wheat threshed with a machine, for I believe it is one great reason, if not the only one, why we do not have wheat grow as thick now as it did before machines come in use. I came to that conclusion last fall, and threshed my seed with flail, and the result is, my wheat came up twice as thick as my neighbors, according to the quantity of seed sown per acre, threshed with machine, which was about one bushel and three fourths per acre, and it stands so yet. I further believe wheat should be sown as soon as the last week in August, for as far as my knowledge extends, wheat sown at that time has not failed to be of a good quality, when that sowed ten or twelve days later has been very much injured by the rust.

JO. WICKOFF.

Romulus, July, 1842.

For the New Genesee Farmer,

Turnips without Cost.

In well manured ground, now occupied with corn and potatoes, where it is not intended to plough the ground before late in autumn, a crop of White Norfolk or other fast growing turnips, may be raised without detriment to the present crop, and without any cost excepting the seed and sowing, by scattering a small quantity between the rows the last time the cultivator or plough is passed between them. This latter operation every *good* farmer knows, should be done much later than many practise, stirring the soil and destroying the weeds often being a matter of great importance, so far at least as the corn crop is concerned, even when the plants have attained the height of two or three feet. The corn being cut up early in autumn, leaves the full occupancy of the ground to the turnips and they advance rapidly in growth. When sown among potatoes, they will in general have at least one month for growth after the potatoes are dug from the ground.

It is true that by this method heavy crops cannot be obtained; but that a considerable quantity is generally afforded and much more cheaply than they are otherwise obtained, has been sufficiently proved by the experience of the writer. J.

Lime and Mode of Application, from Proceedings of Royal Agricultural Society in June last.

Mr. Raymond Barker communicated some observations on the use and abuse of lime as a dressing for and, by Mr. Wm. Henry Fisher, at 18 Conduit street, London. The author's great object is to impress upon farmers the importance of using quick lime, and not lime which once had been quick, but by delay in use and exposure to the atmosphere has become effete, and has absorbed from the air the carbonic acid which it again changes to the carbonate of lime it was before burning. He considers that many thousands of pounds are annually thrown away by agriculturists from want of a proper knowledge of this simple fact; and he recommends them to use their lime in the fresh burnt state, by carting it direct from the kiln upon their land, spreading it in the lump, and in that state ploughing it in directly, the sooner it being got from the kiln into the land the better. The author concludes his communication with the following remarks:—"The lime will be found, if properly burnt, on a second ploughing, to be crumbled to pieces or powder, and on harrowing will be intimately mixed with the soil. From the heat evolved during the slacking of the lime underground, and its causticity, which diffuses itself by the agency of the moisture it meets with through the soil, it will be found to destroy, or at any rate to be extremely obnoxious to wireworms, slugs, grubs, and other enemies which the farmer has to contend with, and which are very frequently the cause of failure in his crops, as well as in rendering most vegetable matter in the soil soluble, and food for future crops. These are the properties that *lime* has in contradistinction to *chalk*; the latter, no doubt, is a very useful addition to many soils, but do not go to the great expence of buying or burning lime, and then allow it to be converted again into chalk, or carbonate of lime, before you plough it into your land. In some districts the limestone is burnt in large lumps, particularly where wood is employed as a fuel—in which case it should be broken to about the size of a small penny roll before it is ploughed in. In some cases it may be said, that, owing to the distance of procuring lime, enough cannot be brought at one time for a ploughing; all I can say is, plough it in as soon as possible. If the turnip-fly is generated in the soil, lime, applied in the manner I have directed, would no doubt do much towards their extermination; and the same effect and result would hold good in respect to the black caterpillar. In conclusion, the good effects of applying lime in the manner recommended, I have myself experienced, and have received ample testimony to the like purport from extensive agriculturists, who, at my suggestion have adopted the plan."

Royal Agricultural Society.--Marling with Shale.

Charles Charnock, Esq., of Holmefield House, near Ferry Bridge, in Yorkshire, Eng., communicated to the Council the results of his application of Burnt Blue Shale, as a substitute for clay or marl on the hilly and thin soil of his farm. Mr. Charnock stated that in the coal districts, a blue clay was brought up, and accumulated so rapidly near the mouth of the pits, as to become a great and inconvenient incumbrance to the owners; that this clay was similar to the "Blue Shale" of the West Riding of Yorkshire, and was frequently burnt, and when drilled along with crushed bones, was in this state found useful in promoting the growth of turnips; but as the whole of the heated mass required frequently to be turned over before it could be thoroughly burnt, the operation was found to be tedious and expensive.

Mr. Charnock having had some years' experience of the utility attending the application of the Blue Shale to the gravelly part of his own farm, was induced, from the success which had attended his trials of it, to select from the numerous experiments he had made on this point, one average experiment to be submitted to the consideration of the Society, and to show to its members that even an article so abundant and useless as this shall become of value if rightly applied to its proper purpose, and, as in this instance, to soils of a gravelly and sandy nature.

Mr. Charnock's experiment in question was tried upon a soil lying upon the magnesian limestone—a substratum proverbial for its natural poverty and inability to resist drought; and he enters into a detailed statement of all the particulars relating to his operations. The result of this experiment was found to be in favor of the system he had pursued, and that his barley crop gave an increase of 27 3-7 bushels, and his wheat crop 17⅞ bushels, per acre, besides saving the expense of from 12 to 16 bushels of rape-dust on the crop.

Waterloo Woolen Factory—Is now daily thronged with farmers and farmers wives, many of the latter encumbered with their nurslings; 4000 lbs. of wool, on the daily average in June, are here sold or exchanged for cloth—the long sales room is crowded with eager buyers; such another hum of voices and confusion of tongues, is not to be found outside a Jews Synagogue. S. W.

TRANSACTIONS OF THE NEW YORK STATE AGRICULTURAL SOCIETY.

The Report of the Jefferson County Agricultural Society is exceedingly well drawn up. We give merely an analysis or abridgement of its contents.

The report commends the practice of manuring fallows for wheat. It would have been gratifying and instructive, had the committee informed us when and how this manure was applied; whether at the first ploughing or at the last; what manure is applied and in what condition; whether ploughed in or dragged in; and in what quantities.

The average yield of cheese to a cow, 309 pounds, by which we suppose is intended new milk cheese only, is respectable, but not more than that, in a country where the pasturage is so abundant. The yield of butter, 112 pounds to a cow, is much less than it should be. In Cheshire, Mass., 500 lbs. of new milk cheese and 25 lbs. of butter are not infrequently obtained to a cow, in dairies consisting of thirty and forty cows, and we have known, of butter, 180 lbs., 200 lbs., 212 lbs. obtained to a cow, where several cows have been kept. We speak in this case of native stock altogether; what might be done with the Improved Stock and with better keeping, remains to be seen.

Premiums appear to have been bestowed upon three farms, although ten farms are briefly referred to. The names of the successful competitors in these cases do not appear, and in only one case is the town referred to in which the farm is situated. This is a singular omission, for which undoubtedly the committee had their reasons, but do not give them. No. 5 particularly, is represented by the committee as being "as fine a farm, in all respects, as the county affords. There are on it 750 rods cedar post and board fence and 350 rods staked with perpendicular stakes." Now it must be admitted that this is a very meagre account, and about as instructive as if the committee had told us of a farm in the moon of as many acres and with just as many rods of stone wall.

We like very much the suggestion of the committee to give a premium to the best farm in each town; and we mean no disrespect in remarking upon the deficiencies of their valuable report; but the object of agricultural premiums is not merely to stimulate agricultural skill, industry, and enterprise; but also, and chiefly, to obtain from another man's success such information of his mode of operation as may enable us to obtain similar results. From a farmer, who becomes the subject of a premium, we should have so extended an account of his whole farm management, operations and experiments, that his farm may serve as a pattern and guide for others. But where not only the farm management is not detailed, but even the names of the farmers and the places are not given, certainly the public are little benefitted; and one of the best objects of giving premiums is entirely defeated.—*Ed.*

Jefferson County Agricultural Society.

Paid in premiums, $385 00.

The viewing committee visited twelve towns of the county, and inspected twenty-two farms and eighteen dairies. It is the unanimous opinion of the committee, that the premium should hereafter be given for the best farm in each town.

Desirable Improvement.—We distinguish a most gratifying improvement throughout the county. The committee regret that less attention is paid to ornamenting the front yards of the new houses with shade trees and shrubbery, than they deserve. Attention paid to these interesting objects, is labor well applied.

Fallows Manured.—We observed a great deal of land sowing to wheat. We never saw fallows in finer condition. Among the gratifying improvements every where observable in our husbandry, the renewed attention now paid to manuring the fallows is very conspicuous. In the first settlement of the county, good crops were raised without manure; but the generality of our lands demand it. Diligent attention paid to accumulating heaps of compost for our fallows, can alone ensure us a reasonable prospect of a profitable crop. Whether lime can not be used to as great advantage, as in some of the older States remains to be seen. To our knowledge the experiment has not, as yet, been fairly tried.

Apple Orchards.—We saw enough to convince us, that with proper attention, the common prejudice that apple trees will not flourish well north of the Black river is erroneous. We passed some as fine orchards in this section, as are to be found in any other parts of the country.

Fencing.—Great improvement has taken place in fencing. Some farms that we visited are almost wholly fenced with straight post and board fence, thus making a great saving of land, as well as a permanent and handsome barrier.

Public Roads.—We found the roads perfectly good; though much of this is owing doubtless to the dry season, yet in turnpiking and bridges there is a gradual improvement. In the town of Alexandria, the newest in the county, we found the roads fully equal to those in the oldest town.

Canada Thistle.—We saw less of that pest to our farms, the Canada thistle, than has heretofore been observed. Our good farmers have learned to exterminate them by thorough ploughing and mowing. It is the duty of the path-master to have these cut from the roads, but surely no good farmer would allow them to remain on roads passing through his farm, even should the overseer neglect his duty, which is manifestly the case in some places.

Size of Farms.—One great error in our farming, observed by us as well as others, is in having too large farms. Except for grazing, it is questionable whether a farm ought to exceed one hundred acres; and one half of this may be considered ample for a farmer who has not a family of boys to assist him. It is a fact often spoken of in the older portions of the State, that after the paternal farm has been divided among the children, as much is raised from the parts by increased attention to manuring and cropping, as was formerly raised from the whole. It is very certain that a small farm adjoining the village of Watertown, of about forty acres, is, by thorough culture and undivided attention to that small number of acres, made more profitable to its owner, Hart Massey, Esq., than some farms in the county of three times the size.

Silk Culture.—The raising of silk worms and the manufacture of silk, is, as we learn, in very successful operation in Carthage. The small children of the family can be employed in this occupation to great profit.

Cheese Dairies.—The twelve cheese dairies we visited milked in all three hundred and fifty-four cows. By adding to the gross amount already made one third for the remainder of the season, we find that each cow will have made 309 pounds of cheese. At six cents per pound this brings the earnings of each cow to eighteen dollars and fifty-four cents for the year.

Butter Dairies.—The six butter dairies offered to our inspection milked one hundred and eight cows; adding one third to the amount now made, they will average one hundred and twelve pounds each; this, at fourteen cents per pound, is equal to fifteen dollars and sixty cents; a difference in favor of the cheese dairies of two dollars and eighty-six cents each cow.

Premium Farms.—The farm to which the first premium is given, contains about one hundred acres of improved land. The present occupant has been on it thirty-three years; he originally took up but forty acres, and having paid for that, has been gradually adding to it. It is a grazing farm, and in a high state of cultivation, not a weed or a thistle to be seen upon it!! There is on this farm, 550 rods of cedar posts and board fence.

The second premium has been given to a farm of 160 acres, 80 of which are improved. The owner has on it, 700 rods of handsome stone wall, nearly every rod of which was laid by himself. It has a fine orchard, and is in all respects in the most farmerlike condition.

The third premium is awarded to a farm in the town of Alexandria. This farm is an example of what can be accomplished in a few years of patient industry. It contains 200 acres, of which 150 are improved. It is mostly a grain farm, in a high state of cultivation, free of weeds and thistles, and has been cleared by the present occupant within the last nine years. There are on it 1000 rods of black-ash fence.

Onondaga Agricultural Society.

This is a highly valuable report, and may be read with advantage by every farmer. Mr. Gaylord's notion that by keeping the locust tree shaded he shall avoid the attack of the borer, remains to be proved. We should be glad to know on what facts or experience it rests. The most successful experiment, we have known, in expelling and keeping off the borer has been made by Allen G. Metcalf of Lenox, Massachusetts. He washed his locust trees as thoroughly as he could with spirits of turpentine mixed with water. His trees were much infected with the borer. After this they were not found, and when we saw the trees, which was some years after the application, they had not returned.

Mr. Gaylord's corn it appears was much injured by the wire worm. We have known one good farmer, who was accustomed, after ploughing green sward, to take a crop of oats, that he might avoid the wire worm, as his corn always suffered severely when it was made the first crop in such cases. Another experienced farmer recommends not ploughing until very late, so that there may be a considerable amount of young grass turned under, upon which the worms might feed, instead of feeding upon the corn.

We gave an account in a late paper of a skilful farmer, who was accustomed to mix salt with his manure, by which he, from long experience, was satisfied that his corn was saved from the attack of the worm. From this and some other facts known to us, it seems quite desirable that salt should in some way be tried for this object. It is important that it should not be applied in too large doses.—Remember Lot's wife, poor woman! —*Ed.*

Onondaga Agricultural Society.

The farm of Silas Gaylord is on the west bank of Skaneateles lake, and about four miles south of the village. This farm contains 145 acres, 25 of which are covered with wood. The 120 acres are all arable land, and suitably divided into fields, on which is pursued a course of crops. A large share of the western part of this farm was formerly so wet as to be unfit for tillage. This Mr. Gaylord has very properly reclaimed by underdraining, which is a very profitable operation on lands which are so moist as to be otherwise untillable. Twelve hundred rods of stone underdrain are already constructed on this farm. The buildings are well located and in good repair. The outbuildings are extensive and convenient, especially the barn, which is very large, with cellar, shed or stabling, under the whole of it. This is a great improvement, as it requires no additional roof, and furnishes a place where stock can be kept comfortable in the most inclement weather; a convenient cellar for the preservation of roots, and a place for preserving manure from the great waste attendant on exposing it to the storms of winter and spring.

The farming tools are in good order, under cover and ready for use. The fences mostly in good order, and

a large share made of posts and boards. The fields are generally in good order, and few weeds are allowed to perfect their seeds. All vacancies in the timber land are filled by transplanting locust trees, which are taken from a nursery on the farm. By thus keeping the locust tree shaded, Mr. Gaylord thinks he shall avoid the depredations of the borer. The stock on this farm consists of 33 neat cattle, all of which are full blood or grade Durham, 4 horses, 15 hogs, and 74 sheep, of the improved English varieties. The division of the farm the present year, with the quantity of crops is as follows:

Wheat,	18	acres,	400 bushels.
Barley,	10	do	300 do
Peas,	5	do	100 do
Oats,	5	do	200 do
Potatoes,	2	do	320 do

Corn, 5 acres, much injured by wire worm.
Meadow, 30 acres, 60 tons.
Pasture, 45 do

The farm of Mr. Gaylord exhibits the practical good sense and untiring industry of its owner, and is well worthy of a visit from those who are designing to raise stock, or erect the out buildings which are necessary on a stock farm.

Your committee were next called to view the farm of Fletcher Woodward, situated on the turnpike, five and a half miles west of Syracuse. This farm contains 236 acres, 225 of which are under improvement; all tillable, and in a high state of cultivation. This farm is naturally adapted to the raising of grain, and to this Mr. Woodward gives most attention. The course of crops which is produced is: 1st, corn or potatoes, on a clover ley, then oats or barley, which are followed by wheat, after one and sometimes two ploughings; then sows eight quarts of clover seed, two quarts of timothy seed, and three to four bushels of plaster per acre on the wheat, early in the spring, and pastures one year after the wheat is harvested. Mr. Woodward sows from one and a fourth to two bushels of wheat per acre, according to the time of sowing; prefers sowing from 10th to 15th September. Never sows grass seed with any crop but wheat; general average of wheat crop per acre, from 20 to 27 bushels; has raised 48 bushels per acre on small pieces. Corn is invariably raised on green sward, with one ploughing, harrowed down smooth, and struck out both ways; rows north and south, 3 feet 4 inches east and west, 2 feet 8 inches apart. Plants early in May, with plenty of seed, coated with tar, and thins at hoeing to 4 stalks in hill; plasters as soon as up, and again after second hoeing; uses the cultivator, hoes 3 times, and makes very little hill.

Barley is generally sown on pasture land with one ploughing; general crop 30 to 58 bushels per acre; sows from 2 to 2 1-2 bushels per acre; oats are cultivated after corn; sows 2 1-2 to 3 bushels per acre; general crop 50 to 80 bushels per acre.

Mr. Woodward's method of cultivating potatoes is to draw at the time of threshing wheat, (with a pair of horses and rope,) the straw, and deposit it in large bunches on a clover ley, leaving a narrow strip all around the field, on which no straw is put. In the spring this narrow strip is ploughed and harrowed fine; then drops the seed once in two feet each way; covers about one inch deep, and keeps the surface as near level as possible. He then takes the straw adjoining this circle, around the field, and deposits it evenly on the ground already planted, to the depth of about 4 inches, when settled together. This leaves another strip for ploughing, which is treated in the same manner as the first, and so on, until the crop is ready to harvest, which is usually from 300 to 500 bushels per acre. This farm is divided into fields of the average size of 23 acres. The fence consists of 963 rods of posts and boards, 215 rods of full wall, and 180 rods of half wall, all in good order. For the convenience of passing these fences, 33 gates are already hung, and the committee were informed by Mr. Woodward that he had contracted for 22 additional gates to be erected this fall. The quantity of produce raised on this farm the present season is as follows:

Wheat,	88	acres,	1760 bushels.
Corn,	20	do	1460 do
Oats,	33	do	1320 do. injured by drought.
Barley,	25	do	750 bushels.
Potatoes,	5	do	1500 do
Meadow,	10	do	20 tons.
Pasture,	47	do	

The stock kept on the farm consists of 12 horses, 28 neat cattle, 83 hogs, and 150 sheep.

Mr. Woodward has given a practical illustration of the fallacy of the idea which is so often advanced, that the farmer cannot afford to be nice in his farming operations, and that the profits will not pay for an outlay of extra capital in improving the soil and fence. One of the committee asked Mr. Woodward if he took an agricultural paper, to which he replied—"I do, and have for a number of years, and have found it of great use. And could I have had the Cultivator, with the present light upon the subject of farming, when I first commenced, (18 years since,) I think it would have been more than $1000 benefit to me."

The farm of Mr. Woodward exhibits in a favorable manner the beneficial effects of what is denominated the new system of husbandry. The antiquated customs of farming which our forefathers followed, are not so dear to him as to cause him to shut his eyes to the improvements which modern agriculturists are annually making in the science of farming. He is not so fearful of being called a "book farmer" as to refuse to take and read the agricultural publications of the day. He is not so fearful of being denominated a theorist as to refuse to try the improvements which are recommended in those publications; and his farm shows the consequence; it being well fenced, well cultivated, very productive, and very clear from weeds, none of which are suffered to seed. In short, everything shows that the operations on this farm are directed by an enterprising, intelligent, practical farmer.

Your committee were next called to examine the farm of Hiram Church, situated in the town of De Witt, 2 1-2 miles northeasterly from Syracuse.

This farm contains 137 acres, about 100 of which are under improvement, and all suitable for tillage. It is divided by a good cedar fence into fields containing about, 10 or 12 acres each. The produce of this farm the present year is,

30	acres	wheat,	679 bushels.
4	do	corn,	200 do
6	do	oats,	360 do
3	do	peas,	75 do
1	acre	potatoes,	150 bushels.
12	acres	meadow,	24 tons hay.
22	do	pasture.	
22	do	summer fallow.	

Mr. Church prepares his ground for wheat mostly by summer fallowing, ploughing three times. His method of raising corn is much like that pursued by Mr. Woodward, except Mr. Church uses a small plough instead of a cultivator; consequently he makes some hill around the corn.

The stock kept on this farm consists of 9 neat cattle, 7 horses, 10 hogs, 60 sheep. Mr. Church makes liberal use of clover seed and plaster, and this practice your committee would earnestly recommend to every farmer.

The farm of Mr. Church is newly improved, compared with the farms of Mr. Gaylord and Mr. Woodward; but is naturally choice grain land; and we doubt not, with the industry and enterprise which Mr. Church exhibits, it will soon show such a degree of neatness, and amount of produce as few, if any, farms can now exhibit.

Royal White, of Onondaga, called the attention of the committee to a field of wheat, containing four acres and fifty-two rods, which Mr. White informed us yielded 167 bushels of wheat. Method of cultivation—broke up about the middle of June, about ten inches deep, and immediately harrowed. Ploughed and harrowed again the fore part of August. Ploughed and harrowed the third time the 10th of September, and immediately sowed with seven bushels of Canada flint and white flint wheat. Three-fourths of an acre of this piece of land was sowed with peas, and was ploughed but twice.

Col. W. Abbott, of Otisco, presented a fine sample of spring wheat, which he originated by a series of experiments from the bald flint, which is a well known variety of winter wheat. For an account of his experiments we would refer to page 138, of volume 9 of the old Genesee Farmer.

The committee recommend that the first premium on farms be given to Fletcher Woodward. The second to Silas Gaylord, and the third to Hiram Church.

It was unquestionably the intention of the Legislature, when they passed the act for the promotion of agriculture, and devoted a part of the funds of the State to that object, that the money so distributed, should be applied in the way best calculated to benefit the agriculture of the State. To do this, it was not deemed enough that agricultural fairs should be held, and the money expended in premiums, but provision was expressly made for giving the greatest publicity to the modes of agriculture adopted, or the different processes pursued, by the successful applicants for premiums. No premium was to be awarded, until the statements referred to, had been made, as without the knowledge that could be gained in this way, one half of the advantages to agriculture, proposed by the State in its appropriation of funds, would be wholly lost. *All* such statements, reports, vouchers, &c., made to the several county societies, were to be transmitted to the Executive Committee of the State Agricultural Society, whose duty it would be to select, compare, condense, and arrange into a report to the Secretary of State, such papers, statements, &c., as should be deemed best adapted to subserve the cause of agriculture in the State. The Executive Committee regret to say, that in too many instances, these requisitions of the law appear to have been entirely overlooked; and that where partial returns have been attempted, they have in most cases, been very meagre and unsatisfactory, barely an approximation to the returns contemplated by the provisions of the act."

Sowing Plaster.—Many farmers suppose that plaster should only be sown after spring vegetation has advanced; this is evidently a mistake, as plaster must be dissolved before its manuring properties are developed; rain, frost, and even snow, are necessary to effect this result; hence some have observed that their plaster did no good in a dry season of the first year.

S. W.

What shall Farmers do, when Doctors disagree?—It has been said that plaster thrown among horse litter will seize upon the ammonia of the urine and preserve it with the manure. I believe this is agreeable to Leibig's theory; but other chemists say that the lime in the plaster will certainly expel the ammonia.

S. W.

Fall Ploughing.—Some farmers condemn fall ploughing, because it does not succeed on an easy-friable soil. Is this any reason why a stiff clay should not be improved by it? A clay garden with long manure ploughed under in the fall, will save much tedious labor in the spring, besides vegetation will be much earlier.

S. W.

ROCHESTER, AUGUST, 1842.

AGRICULTURAL EXCURSION.

By the invitation of several respected friends in Monroe and Livingston County, the editor has had the pleasure of passing a few days with some of the excellent farmers of the Genesee Valley. He gratefully acknowledges their kindness and hospitality. He could not have had a more delightful excursion. He is never more at home than among the farmers, and truly enviable is the condition of the residents of this charming country. He has taken the liberty of adding some hasty and superficial observations made in this jaunt in reference to the agricultural condition of this region, which he trusts will give no offence, and which will be extended when he has more room. They are given not from any conceit of their value—very far from this; but in the hope that they will call attention to the subjects adverted to, and elicit communications from those whose intelligence and experience would greatly instruct the agricultural community.

The Genesee Valley.

The river Genesee rises among the high lands of Pennsylvania in the neighborhood of the Susquehanna. Winding its way among the mountains, it enters New York by the Southern side of Allegany county, passes into Livingston county, which it divides longitudinally nearly in the centre, and after traversing the whole breadth of Monroe county pours its rich tribute into Lake Ontario. At its ordinary level it presents an average breadth of only a few rods. Its course is remarkable for its windings and doublings. It has some rapids; and it has at least six considerable falls, all within New York, of remarkable picturesqueness; and at high water, of singular beauty and grandeur. Its rapid torrents, its brilliant cascades, its sweeping and in some cases its terrific floods, and its lofty and precipitous walls, rising for a considerable length of line to a height of 400 feet and presenting in some instances, perpendicular cliffs of 600 feet, are objects of attraction to men of taste, the geologist, and the curious traveller. In these respects they are surpassed in the Northern United States only by the world's wonder, the giant of the waters, Ningara.

The river, after successive leaps and rapids soon after leaving Allegany county, at Mount Morris becomes a quiet and in low water a sluggish stream, bordering on each side meadows and alluvions of large extent and eminent fertility. At the village of Mount Morris the river may be said to enter the Genesee Valley. Here the flats begin, forming an extensive region of alluvial meadow, surrounded by hills of medium elevation and of easy and gradual ascent, presenting an expanse of an average width of more than two miles, as nearly as the eye would enable me to judge. A large portion of this land is cleared and under cultivation. It was to a degree cleared when the whites first came into the country; and was a favorite resort of the Indians, whose judgment directed them to select the most fertile as an instinctive taste led them to spots the most picturesque and beautiful. A considerable portion is still occupied by a deep and dense forest of extraordinary magnificence. The parts which are cleared, are adorned, or perhaps it might be properly said, left with excellent taste, as they were adorned in their original condition, with here and there a single tree of beautiful proportions, sometimes a belt of considerable length, and at other times a clump equally as grateful in their shade as they are exquisite in their form and foliage. The largest tree that has ever come under my observation, is an oak on the meadow of Mr. Wadsworth in Geneseo, being full eight feet in diameter, standing out in its majesty as the contemporary of other generations and the mute historian of departed centuries. Under its shade the imagination naturally reverted to days gone by and to the changes which have transpired during its long reign. The wild children of the forest, who were accustomed to gather under its spreading branches to celebrate their rude festivities or hold their councils of war, have all departed; and the quiet and rejoicing herds, marking the progress of civilization and humanity, repose securely around it. The council fires are extinguished; the deadly arrow no longer rustles among its boughs; and the warwhoop and shrieks of vengeance, which once filled these valleys with terror, have given place to the songs of harvest-home and the gentle and peaceful undulations of the village bell. Everywhere among these meadows, clad in a verdure of surpassing depth and richness, and waving with their golden harvests, cultivation has triumphed over the rudeness of nature, and art and skill and taste display their brilliant trophies.

It was once asked what was the use of rivers, and the reply was, to feed canals with. Acting upon this assumption, the State has penetrated the whole of the Genesee Valley, from Rochester to Dansville, with a canal, and availed themselves of the waters of the Genesee river to fill its banks. The line of passenger boats on this avenue are of the best description. The canal from Rochester passes for some distance through an uncleared forest of extraordinary growth until presently it emerges into a highly fertile and cultivated country, and for its whole distance to Mount Morris, as far as we pursued it, intersected an agricultural country as rich as the eye could rest upon, and dotted all over with flourishing villages and the abodes of rural wealth and independence. Nothing seems wanting to render the picture perfectly enchanting but an expanse of water; and if nature had seen fit to spread out in this valley a lake like that of Canandaigua or Seneca, the imagination would have had no difficulty in recalling all the beauties and splendors of the primeval state.

The Soil.—The soil of the country varies somewhat in different places, but is throughout strongly aluminous and calcareous. On the meadows or flats it is alluvial and full of vegetable mould, the washings and gradual deposits of the hills, and so clayey as to be used with advantage for bricks. In some cases on the uplands, it is so strongly clayey as to be cold and heavy, and unfavorable to any grain crop and difficult and discouraging in the cultivation. The best soils are undoubtedly those of a gravelly nature; with clay enough to render them tenacious; and full at the same time of small and finely comminuted stones, which are supposed to be limestone, though as well as I could learn no exact chemical analysis has been made in any case. This kind of soil prevails in Wheatland, Caledonia, York and other places, and is eminently productive. On Mr. Wadsworth's farm in Geneseo, I found a marly substance composed of lime and clay, which readily effervesced with acids, indicating the presence of carbonic acid. In the hilly portions of Mount Morris, the crops were later than in the valley region, but promised most abundantly. Here, it was stated to me, no lime is found. These lands, however, have been much more recently brought under cultivation than those which I have before adverted to. The best crop of wheat which I found in my whole journey, though by no means the most extensive, that which promised best in respect to its evenness, cleanness and fulness, was in this part of the country on the farm of James Conklin of Mount Morris. It was of the red chaff variety. None of these soils as yet, however, exhibit any diminution of their product, though in some cases the cropping is severe and often without manure.

Crops.—The crops cultivated in the county are almost wholly wheat, oats, and grass. Wheat every where predominates, and is the article on which the farmers mainly depend for their cash returns. On the alluvial meadows herds-grass, red top and various natural grasses prevail; on other lands, subjected oftener to the plough, clover is mainly cultivated.

Of all the crops, wheat claims the principal attention of the farmer. The average crop, as rated almost unanimously by the intelligent farmers whom I consulted, does not exceed twenty bushels, which is certainly very much below what the land is capable of producing. Where the error or deficiency lies, if error or deficiency exist, is not readily perceived; but if possible it is most desirable that it should be ascertained. The quantity per acre of seed sown is about 1¼ or 1½ bushel, and the general practice is to wash in brine, and lime the seed before sowing. The time of sowing is from the first to the 15th September. One or two farmers spoke of the advantage of putting in their seed the last part of August.

Much larger crops are sometimes obtained, and I saw several fields of large extent, which might safely be put down at thirty bushels per acre. Mr. Shefer near Scottsville, one of the earliest settlers in the country and the owner of a magnificent farm originally of 700 acres, in Monroe county and intersected by the canal, in the early settlement of the country obtained from forty acres of land in a single field, 2500 bushels of wheat, which was at the rate of 62½ bushels per acre. Within a few years, Mr. Hall, in the centre of Wheatland, on 12 contiguous acres of land, obtained 648 bushels, or 54 bushels per acre. A neighbor of his, Mr. Blackmir, obtained in one case 68 bushels per acre.

Not having had the pleasure of an introduction to either of these farmers, I could not ascertain what particular circumstances of soil or culture enabled them to produce crops so extraordinary. No such results are matter of accident, or, as it is often termed, luck, and must in a great degree depend on some peculiar superiority in the condition, cultivation, or management of the soil. The best cultivation in England and Scotland produces 50 and 60 bushels of wheat to the acre. Now there is no circumstance connected with our climate, soil or condition, which should prevent the wheat farmers in the Genesee valley from producing as much as can be grown by any farmer on any land in the world; and the difference between 20 and 50 and £0 bs. in the produce of a field, certainly deserves all consideration. The crops of Wm. Garbut of Wheatland, whose farm for its condition and crops, strongly attracted my attention, usually average twenty-five bushels per acre. There certainly is no reason why our friends Garbut or Harmon, two of the best farmers in the country, should allow themselves to be out done by any farmers in any country.

Mr. Harmon of Wheatland, has taken great pains in the cultivation of wheat, and made experiments with several kinds of wheat, having cultivated them separately with a view to ascertain their comparative times of ripening, their hardiness, their proof against or freedom from injury either by insect, rust or mildew. He is still pursuing these experiments with great care. At the Monroe Agricultural show he exhibited twelve different kinds in grain and in sheaf, with a view to attract the attention of the farmers to this important subject. He has now growing several of the bald and bearded varieties, among which are

the Talavera, the Provence, the Virginia May, the Red Chaff, the Hutchinson and the Crate, besides others; and of the comparative result he has kindly promised a full account.

He desires me likewise to say, that if farmers will apply to him for seed, they may rely upon that which is clean and genuine. I can have no doubt that this warranty may be entirely relied upon.

Oats are here a remarkable crop. I have never seen heavier crops any where. The oat usually cultivated is the common branching oat, and weighs 32 pounds per bushel and yields ordinarily forty and upwards of bushels per acre. I saw one field of the Tartarian or Horse Mane oat, so called from the panicles hanging all on one side. This I think was at the Shaker settlement in Groveland, and in their cultivation usually yielded from 40 to 60 bushels per acre. The largest growth of the common oat I saw on the rich meadows of Mr. Cuyler in Leicester; they were nearly five feet high throughout the field. Their yield, though it must be matter of conjection, would probably not be less than 60 to 80 bushels per acre. But by far the best field of oats which came under my notice, was on the well managed farm of R. Harmon in Wheatland. It was the Scotch potato oat, weighing ordinarily 44 lbs. per bushel, and must yield a very large crop. This oat is said to degenerate after the first year's cultivation. It would be well to inquire what occasions this degeneracy.

The amount of seed sowed is 2½ bushels per acre. Mr. Harmon informed me that in one instance he obtained forty bushels from 15 qts. sown. I found some farmers who were accustomed to sow three bushels per acre. The black oat is sometimes cultivated, but I know no advantage which it has over any other.

Rye appears to be scarcely cultivated here. I saw in my journey only one field. Where as much wheat can be obtained as rye from the same extent of land and with no greater expense of cultivation, the superior value of the wheat product leaves no ground for hesitation as to which to choose.

Barley.—Of Barley I saw many fields and some very heavy. The average yield stated to me was 28 bushels. Wm. Garbut of Wheatland, gives me as the average product of his fields, forty bushels. He sows the double in preference to the four rowed barley, and considers one bushel of barley as food for any stock, equivalent to a bushel of corn. Some extensive fields on the Genesee Flats must yield more than forty bushels to the acre. The breweries in the country formerly created a large demand for barley, but the progress of temperance has greatly abated this demand.

Peas.—Peas are considerably cultivated, and under successful management yield forty bushels per acre. This, however, is an extraordinary yield. They are mainly cultivated for stock, the grain being quite equal to corn for sheep, and the haulm, when well saved, is as nutritious and as much relished as any long feed which can be given them. A pea called the grass pea I found growing in two instances, in the one for the use of Bees, for which purpose it was sown broadcast and much esteemed; in the other, as matter of experiment, in order to ascertain its yield and its value. It did not promise much.

Indian Corn.—This may be considered as a rare crop in the Genesee Valley, and the cultivation of it inferior. Mr. Wadsworth gave it as his opinion that the average yield was not over 25 bushels per acre; but Mr. Bond, an experienced and intelligent farmer, stated that with good cultivation fifty and seventy-five bushels per acre might be had, and he had himself known instances of 116 bushels per acre. Indian corn is evidently not a favorite, and is fairly distanced by its great competitor, wheat. There may, in the condition of the market and various local circumstances, be good reason for this; but when the value of the grain and the value of an acre of well cured corn fodder are both considered, when sheep, or horses, or horned cattle are kept, I believe that the corn crop deserves much more attention than it receives.

I was surprised at the statement of Mr. Brooks of Brookegrove in Mount Morris, that corn to use his own expression will not grow there upon newly cleared land even when it has been burnt over; and that the land must be sometime under cultivation before a crop of corn can be produced. This is contrary to almost universal experience in other places, where newly cleared and burnt land is considered highly favorable to corn. I am at a loss to account for this, but I cannot demur to so high authority. Large crops of wheat are obtained here. The growth is principally oak on the high lands, with some sprinkling of hickory; on the lower and moist lands we find much rock maple and elm.

Potatoes are not largely cultivated. They are valuable for sheep; but the present prices of pork and beef give no encouragement to their cultivation for swine or cattle. That potatoes are much more valuable for sheep and cattle than ruta baga, I have no doubt; but as many bushels are not usually obtained on the same extent of land; and the care of preserving and the cost of seed, and the labor of harvesting favor strongly the cultivation of ruta baga in preference.

Esculent Vegetables—In so hasty an excursion through the country and so superficial a view as was in my power, it would be presumptuous in me to speak with confidence on any subject connected with the husbandry of the country, or think to afford much knowledge in relation to it. I can only say that I saw but a single instance of the cultivation of esculent vegetables for stock. This was on the farm of Mr. Garbut in Wheatland, who had several acres in carrots, beets and mangel wurtzel. I must leave it to some other occasion to discuss the pros and cons in relation to this matter.

Of Flax, I saw only one field and that at the Shaker village in Groveland. It appeared well. The habits of this industrious people, who, as a general rule and as far as it can be done, produce and manufacture all their own clothing, lead them to the cultivation of flax, which is in a great measure abandoned by other farmers. This crop I am persuaded might be cultivated to advantage by many farmers. Where 300 lbs of lint and fourteen bushels of seed can be obtained to an acre, and this is not uncommon under good cultivation, the crop will yield an ample compensation for its expence. (To be Continued.)

Crops and Markets.

Throughout the whole country the crops of wheat and grass are represented as most abundant and fine. There are some small complaints of rust in some places, as indeed there always will be, but they are of little moment; and a finer season for harvesting never was known. It has been almost unexampled.

Indian corn, likewise, which at first seemed likely to fail, is making rapid advances, and promises a good crop. The same with potatoes, barley, and all other products.

The crops of wheat in Ohio and Michigan are likewise as good as was ever known. The price of wheat in Rochester can hardly be considered as settled or even fixed, as no new wheat has as yet come into the market. Some millers have expressed the opinion that it will begin at a dollar but soon go down to 75 cents.

The Beef and Pork markets at New York and Boston remain without material change. Probably a much smaller quantity of pork will be made this season than usual, and the prices for pork or for live hogs are not likely to recede from their present position.

Wools of a fine grade command only 25 cents; and in many cases only half of this is paid in cash, and the rest in cloths. The free importation of South American wool costing less than 8 cents, and the raising of wool on the Western Prairies, for which there are large preparations, must keep prices down, tariff or no tariff.

In the midst of the greatest plenty that ever fell to the lot of any country, we are crying our eyes out for distress; and the National cow, with a swimming pail of milk under her, seems determined to kick it all over.

Prospect of prices of western agricultural products.—As over-production and a reduction of the currency have reduced the price of most manufactured commodities, and steam is now employed on the prairies to drive the plough, it would be very strange if agricultural products (pork excepted) did not also decline in price. The cash received for a bushel of wheat, will now purchase in this village, 10 lbs. of good Rio coffee, or 20 lbs. of inferior N. O. Sugar. A pail of butter will exchange for a bundle of domestic calico and muslin, as large in bulk as the butter itself.—Ought farmers to expect this unequal exchange of commodities to continue so much in their favor always? I think not.

Flour is now selling in New York at $6 the barrel to export to England; if Great Britain has good crops this year, and there is no failure of crop on the continent of Europe, nothing can prevent very low prices for flour in New York in one year from this time, but a failure of our own wheat crop, which is improbable, or a partial failure of our summer crops, which, from present appearances, is very possible. In either case farmers must expect and prepare themselves for small profits, as high prices from failure of crops is a calamity, which compels even the farmer to eat dear food. It is common for farmers to complain of the low price of wool, yet wool is much lower in Europe than in the United States; the English manufacturer gets fine wool from the continent for 25 cts. a pound, while our manufacturers pay our own farmers 40 cts for wool of like grade. The fact is, what is a low price to an extravagant, expensive man or family, is a high price to those whose wants are fewer, who practice a better industry, economy, and self-denial! In this reduction of profits and the consequent means of expenditure, who does not see a precious result, even to the farmer? Ask a thriving, wealthy American lord of the soil what are his troubles; if he is honest, he will tell you it is the effeminate habits and expensive wants of his children. With uninterrupted pecuniary success, where would these troubles end?

Waterloo, 8th June, 1842. S. W.

Protective Tariff.—A farmer who writes in the May No. of the Northern Light, says that a high tariff would "make us farmers work harder to obtain the same amount of enjoyment," and "protect our industry much in the same way that it would be protected by compelling us to resume the old fashioned wooden mould board, and throw aside the cast iron plough." But the other side of the question is ably maintained in the same capital monthly—it has two sides. S. W

Culture of Potatoes.—If they are grown in a warm dry country, as between Syracuse and Buffalo, put no stable manure in the hill; but if on cold Hemlock soil, where it rains or snows at least once a week, they may be covered in the hill with warm manure without any danger of burning up the tubers. Providence is truly kind to such countries, in giving them grass and potatoes, such as would make a western villager's cow laugh, and his own mouth water. If they can't grow gourd seed corn, neither can they even in their wet grounds, raise miasma enough to furnish a single case of fever and ague. S. W.

On Ploughing in Green Sward for Wheat.--Green Vegetable Manure, and the Land made to enrich itself.

MR. COLMAN—The objections of your correspondent "Turnipseed," page 106, be it observed, are entirely theoretical, the result of mere opinion. Not so Agricola's remarks, page 6, for they realy appear to be based upon experimental fact. Which are we to choose? I for my part have a guess, that our friend A. will bring his harrow to work pretty smartly in this case, which will satisfactorily settle the question, if indeed such be not already done. Probability favors his observations, inasmuch as the mellowness of the soil is at all times favorable to its fertility. The burning influence of the sun upon land deprived of its natural vegetable coating, is peculiarly impoverishing, and it seems probable that the longer this unnatural exposure is kept up, and its surface varied by repeated and rough ploughings, the greater injury it sustains by summer heats, and the more need will there be for the mellowing ingredients of manure and other dressings. If the land be rolled and dressed to receive the seed after a single ploughing, it is clear that the exposure of the whole body of the soil to the influence of the sun's rays has not been so complete as in the former instance of repeated ploughing; nothing more has been done than is requisite to destroy the former vegetation and prepare for the intended seed, which soon comes up and protects itself and the land from the parching heat by throwing out the blade that protects the root. Now it will be observed with the slightest attention, that of the three methods proposed, page 6, that by the first a good crop of clover was sacrificed to begin with, and the subsequent ploughings served to perfect its destruction, together with such weeds as might have been present, and yet with all this, plaster must be freely used; in the other two plans as before alluded to, the land was not exposed more than was requisite to destroy former vegetation.

I might add more, but leave the subject to the discussion of abler individuals, and dismiss it with earnest good wishes for the success of both parties.

Yours respectfully, J. W.

Rochester, July 5, 1842.

The suggestion of our correspondent that land suffers by exposure to the sun without any vegetable covering, is very questionable and by no means an established philosophical truth. The soil undoubtedly gathers much of its fertility from exposure to heat, light and air. It suffers, however, when the vegetable matter in it is brought to the surface, and there being decayed, may be said to be evaporated instead of being retained as so much humus in the soil.

Since the remarks in our last in relation to this subject, we have visited the farm of Mr. Cornell in Henrietta, Monroe Co., who has been in the habit, for the last five years, of ploughing only once for wheat and turning in a clover ley. His success in this practice is complete, and there is probably no farmer in Western New York, whose crops yield a higher average. By this process fallows are entirely abolished; and his land is always under a crop.

We shall give in this paper an account of Mr. Keeley's experiment, to which we referred in our last, and some remarks made at a late meeting of the Royal Agricultural Society on the same subject, where, by a curious coincidence, it is advised to sow mustard with a view to its being ploughed in, in order to enrich the ground.—*Ed.*

On the Cultivation of Rye.--John Keeley's Statement.

To the Trustees of the Essex Agricultural Society:

GENTLEMEN—Having for some years past been more than commonly successful in raising large crops of winter rye by a process of cultivation which I believe is entirely new; I have been induced by the suggestion of some gentlemen whose judgement I very much respect, to submit for your consideration a statement of the mode of culture with the produce. And that the success of the experiment this season, may not appear to be altogether accidental, it will perhaps be as well to communicate the result of the process for the three or four previous years.

The land on which the experiment has been conducted is situated on the Merrimack, about a mile and a half east of Haverhill bridge; and came into possession of my father in 1827. The soil is a sand, approaching to loam as it recedes from the river. Perhaps the term *plain land* (by which it usually passes) will better convey an idea of the quality of the soil. It is altogether too light for grass. The crops we find most profitable to cultivate on it are winter rye, Indian corn, potatoes, and to some extent turnips. Oats might probably be raised to advantage, were it not that the land is completely filled with the weed commonly called charlock, which renders it entirely unfit for any spring crop, excepting such as can be hoed. The crops of rye, on the neighboring soil of the same nature, vary I believe from seven or eight, to twelve or thirteen bushels per acre, according to the cultivation and their approximation to the river. We usually raise on the land from thirteen to thirty bushels of Indian corn per acre. Potatoes are very good in quality, but the quantity is quite small; not sufficient to be profitable, were it not that the land is very easily cultivated.

In the summer of 1827, we sowed three bushels of winter rye near the river, on about two acres of land, which produced twenty eight bushels.

In 1828, we sowed four bushels on four acres of land running the whole extent of the plain from the river. This piece was sowed in the spring with oats; but they were completely smothered with charlock, and about the middle of June, the whole crop was mowed to prevent the charlock seeding. By about the middle of August, a second crop of charlock having covered the land, it was ploughed very carefully, in order completely to bury the charlock; and then suffered to remain until the 15th of September, when we began sowing the rye in the following manner. A strip of land about twelve yards wide was ploughed very evenly to prevent deep gutters between the furrows, and the seed immediately sown upon the furrow and harrowed in. Then another strip of the same width, and so on until the whole was finished. We found the oat stubble and charlock entirely rotted, and the land appeared as if it had been well manured, though none had been applied to this part, since it had been in our possession. The rye sprung very quick and vigorously, having evidently derived great benefit from being sown and sprouted before the moisture supplied by the decaying vegetable matter in the soil had evaporated to any considerable extent. This crop produced 133 bushels.

In 1829, the charlock was suffered to grow on the land appropriated to rye, until it had attained its growth and was in full blossom. The land was then ploughed very carefully and the charlock completely covered in. In a short time a second crop appeared more vigorous than the first. This also was allowed to attain its growth, and then ploughed in as before. A third crop soon appeared, which of course was destroyed when the land was again ploughed for sowing about the middle of September. This piece of land was a parallel strip running from the river, and containing two acres. Two bushels of rye were sowed. The crop presented a remarkably promising appearance, and yielded seventy four and a half bushels.

In 1830, the land appropriated to rye included nearly all the lighter parts of the soil, and owing to a pressure of business was not attended to as we could have wished. It was ploughed in the early part of the summer. But harrowing to destroy the weeds was substituted for the second ploughing. This, and the unusual blight which affected all the grain in this part of the country, led us to anticipate a small crop. It yielded however fifteen bushels to the acre.

The land on which the crop of rye was raised the present season, had for the three or four previous years been planted with Indian corn. And owing to the extent of our tillage land, we have not been able to apply more than four or five loads of manure to the acre this season. The charlock was suffered to attain its growth as usual; and on the 18th and 19th of June it was carefully ploughed in. The second crop was ploughed in on the 6th and 7th of August. On the 14th and 15th of September it was sowed in the usual manner, namely: a small strip of land was ploughed and the seed sown immediately upon the furrow and then harrowed in. Then another strip of land was ploughed, and so on until the whole was completed. One bushel per acre was sowed as usual. The seed was originally obtained from a farmer in this vicinity, and I suppose is similar to that which is generally used. We have never prepared our seed in any manner, but have directed our attention solely to the preparation of the land; and to this we attribute our success. Owing to the unusual severity of the winter, the crop was considerably winter killed; but recovered very soon in the spring, excepting in the midfurrows. There, as the land lies very level, the water settled and so completely destroyed the rye that they continued bare the whole season. This would of course cause some diminution in the crop; perhaps a bushel or two. The rye was reaped at the usual season, and, as the weather was favorable, immediately put into the barn. The land contained one acre and thirteen rods, and yielded *forty-six bushels and three pecks. A remarkably fine sample.*

In entering a claim for your premium, I would ask your attention particularly to the process of cultivation. It is, I believe, entirely new; and capable of general application.

Sowing the seed immediately after the plough, we consider very advantageous to the crop. The soil being then moist, causes the seed to spring immediately, and gives a forwardness and vigor to the plants which they ever after retain.

The process of ploughing in *three* crops of weeds before the seed is sown very much enriches the soil. It would be altogether unnecessary to attempt to refute the notion, that by such a process nothing more is applied to the soil, than was before derived from it. If one could not discover by the light which Chemistry has shed upon the subject of agriculture, sufficient *reasons* for the contrary conclusion, observation, one would think, would be sufficient to convince any intelligent man of the fact.

And here I would suggest that I do not consider the experiment as we have conducted it, quite complete. To render it more so, in the first place, in ploughing in the weeds, I would not turn a furrow after the dew had evaporated. I have no doubt but that a large portion of that fertilizing quality in the soil, which (during the summer months) is continually exhaled from the earth, is by the dew brought again within our reach, and it would be wise to avail ourselves of the opportunity of again burying it in the soil. And in the second place, I would by all means use a heavy roller after each ploughing. It would fill all the cavities left by the plough, and by pressing the soil more closely to the weeds, at once hasten their decomposition and very much retard the evaporation from the soil.

But the land is not only very much enriched by this process. There is, I conceive, no method by which it can be so effectually cleaned. Three times during the season, a fresh surface is presented to the atmosphere, and each time, as the decaying vegetable matter increases in the soil, so is the exciting cause augmented to make a more vigorous effort. We have in this manner gone over nearly all our land which is infested with charlock, and the diminution of the weeds is quite sufficient to warrant the expectation, that in a few years it may be comparatively eradicated.

Very respectfully,

JOHN KEELY.

Haverhill, Sept. 22, 1832.

The subjoined statement was made at a meeting of the Royal Agricultural Society in England on first of June last. It is not a little remarkable that this experiment of Mr. Cawston so strongly confirms the results of Mr. Keeley's experience. These cases are among the most striking on record of the value of ploughing in green manure; and show that the means of enriching the soil at a trifling expense are within the reach of every farmer.

Vegetable Manure.

Mr. W. W. Cawston, of Worlington, near Mildenhall, in Suffolk, transmitted the following result of his experience in the ploughing in of green crops—"I am not aware that the attention of the agricultural world has been drawn to the following process, which I have had many opportunities of seeing tried with the most decided and beneficial effects in this neighborhood. When trefoil has been seeded, clover or other layers failed, peas or tares grown, or a clean summer fallow made for wheat, in the middle of August, or thereabout, skeleton-plough, or plough very flat, and sow a peck of white mustard seed (sinapsis alba) per acre; harrow in with light drags, clean off any grass or rubbish; and as soon as it is well up, top dress with a light coat of farm-yard dung (say 6 or 8 loads of 32 bushels). In 6 or 8 weeks a very heavy, fibrous, lux-

uriant crop will be ready to be ploughed in for wheat as soon as the flowers are beginning to open. This operation may be easily accomplished when the plant has risen 3 or 4 feet high, by attaching a chain to the head and handle of the plough, which will completely draw it all into the furrow, and the following land buries it neatly. A large supply of vegetable manure is thus cheaply obtained, and the seed costs now about 2s. 6d. per peck; while the mustard, if wanted, is excellent feed for ewes at tupping time. If any further directions should be deemed useful, I shall at all times be most happy to supply any information I may possess."

We give with the greatest pleasure the subjoined communication, quoted from the New England Farmer of the 23d of March, first, because of its intrinsic value and interest; and next, because of the source from which it comes, Morrill Allen of Pembroke, Mass., one of the most practical, intelligent, and successful farmers in the country. We take the liberty to jog his elbow as ours is every day jogged, to remind him that the time is short, that what *we* do *we* must do quickly; and that he is bound on every principle of duty and humanity to let the world have the benefit of his rich experience before he leaves it, especially as he is now taken out of the yoke. It may not seem very becoming for us to catechise an old friend in this way; but we hope he will remember that five hundred miles makes no difference in the affections; the chain of friendship disdains all distance and reaches alike from pole to pole and from earth to Heaven From the latter place, however, agricultural communications will not be so direct as here, excepting in the form of dew and rain and air and ten thousand other blessed influences, but not in the way of pen and ink. This is confined to earth; do therefore let us hear from him while here; and we will listen as reverently and as gratefully as if, as we have often done, we were guests at his hospitable board, or warming our feet (we cannot say smoking the pipe of friendship, that we never do but figuratively) at his kitchen fire.—*Ed.*

Leather Shavings for Manure.

Mr. Editor—One of your correspondents inquires what is the value of a cord of leather shavings destitute of oil. We should suppose it would be difficult to find a cord of those shavings, in any manufactory, entirely void of oil. There may, however, be operations exclusively in sole leather, which would produce them. We can speak only of the efficacy of the shavings in the shops of the shoemaker and currier. The oil in those shavings is no doubt a powerful ingredient, but cannot be powerful enough to produce more than a small portion of the effects witnessed. The gelatine of skins would be generally admitted to be a very effective manure; this quality may seem lost in the conversion of skins into leather, and there may be so firm a combination of gelatine with tannin, as to defy the power of the chemist to educe from the leather any thing strongly resembling the original qualities of the skin. The laboratory of nature, however, will often show results which that of the chemist cannot. The supposed insolubility of leather shavings should not operate as an objection against the use, more than the same supposition does against the application to land of the hair and hoofs of animals, feathers and wool, which by general consent rank among the most powerful of manures.

We did not sit down to write a dissertation, but to give a narration of facts. Forty years ago, we purchased a small farm of a shoemaker, who had cast the shavings from his shop by the roadside or in the corners of lots. Our first object was to clear away those unsightly heaps. We carried them into the fields, believing if the leather could do no good, the vegetable substances would, which time had incorporated with it. Every field on which these heaps were spread, became remarkably productive;—so much so as to excite the admiration of neighbors. And something might have been ascribed to ingenuity in cultivation, which was due rather to the energy of old leather. This early, and in some degree accidental success, (for then we had neither read nor thought much on subjects connected with agriculture,) induced us to be very saving of scraps of old leather, we have been in the habit of cutting up old shoes and boots and spreading them on fields, and always think there is an ample remuneration for the labor bestowed. It will be perceived there has been no course of experiments which could qualify us to give definite answers to all the questions of "Inquirer." We think, however, that leather shavings are a good dressing for almost any description of soil; that they will assist in the growth of nearly every class of plants, perhaps more from preparing the soil for vigorous action than direct influences. We think three cords sufficient for one dressing of an acre, and believe the ultimate results of such a dressing would be greater than a dressing of six cords of the richest barn manure.

M. ALLEN.

Pembroke, March, 1842.

From the Mark Lane Express

Beneficial Effects of Bran as Manure for Turnips.

Sir—A letter appeared in the "Farmer's Magazine" of last year, giving the analysis of bran, (the husk of wheat) and recommending the farmers to try it as a substitute for bones and other manures; and when tried as an experiment in competition with other manures, that the result of such experiment should be reported through some of the journals for the benefit of his brother agriculturist. With this request I am willing to comply. After losing two crops of Swedes successively in a field that had been drilled with ashes, I noticed the letters on this subject, and determined on drilling twenty-five strikes per acre of pollard, (the finer portion of bran) with the turnip seed over one-half of the field; the result proved that when the men were put in to hoe the turnips, they fancied the field had been sown at twice, and at an interval of two weeks; so great was the difference in the early growth —a most desirable point, as is assists their getting out of the range of the fly: this marked and sensible difference was always apparent throughout their growth, and at the maturity of the crop. There was as nearly as could be estimated an increased produce of *one-third more in weight of turnips per acre*, which must have arisen *wholly* from the pollard, as in all other respects the field and its treatment were alike.

The experiment has been to my mind so conclusive and satisfactory, that I intend drilling some quantity this year, and shall also try it with other crops besides turnips where the land is not in high condition. It can be easily carried back by the farmers when delivering corn to their respective millers, therefore without any cost or expense of transit; it is now selling at about 4*l*. 10*s*. per ton, which is cheap for the benefit received when compared with the cost of bones, about 10*l*. or 12*l*, per ton, which makes it the more desirable. I would not recommend so much as six cwt. being used to an acre, but any quantity from six cwt. to five cwt. per acre, which would be at a cost of manure of *about* 1*l*. 2*s*. 6. *per acre for an increase of one-third more in produce.* Should others follow, as I have done, the recommendation given in the letters before alluded to, it would only be fulfilling the duty we owe one another to report the result, more especially if it should prove favorable as in the above instance.

I remain, your obedient servant,

WILLIAM MONK.

Midhurst, Sussex, April 14.

Garden Seeds.—Why don't seedsmen mark the year on their papers of seed, in order that the retailer may not impose old seed on the customers? nothing is so provoking, particularly in a backward season like this, as, after waiting three weeks, to find no beets or onions out of ground. If the doctrine that "honesty is the best policy," will apply to one trade more than another, it is to that of a seedsman—many of my neighbors who are not pinching of a 6*d*, now raise their own seed to avoid being cheated. Onion seed wants much soaking. S. W.

Onondaga Salt.—The salt inspector at Salina has turned the tables upon the Albany Cultivator, for saying that "large quantities of lime were used in the adulteration of salt." Had the Cultivator said a little lime was used to discolor the red oxide of iron which colored the salt, he would have nailed the inspector to the counter. S. W.

Indian Corn.—At the moment when the temperance reform is doing away with the use of corn as the basis of alcoholic drinks, man has discovered the invaluable secret of turning the stalk into sugar, at a far greater profit to the agriculturist, if report is true, than can be realized from the ripened grain. S. W.

Asparagus Bed.

To J. S. who inquires what is the best mode of making and cultivating an Asparagus Bed, we answer that the whole affair, which was once hidden in mystery or rather involved a very complicated process, is now as simple as the simplest operation in husbandry.

Sow your seeds in a nursery bed in drills and keep them clean of weeds the first year. The next year prepare your bed by trenching the ground fourteen to eighteen inches deep, always keeping the top soil uppermost; or, if the bed is to be a large one, by trench ploughing, that is by passing twice in the same furrow with a plough, the second time with a plough without a mould board, or a subsoil plough; and manure the ground as highly as possible. After it is well prepared, make trenches with a spade or plough about eight inches deep and two feet apart; place your plants of one years growth in these trenches; put in upon the plants two or three inches of good well rotted or composted manure and cover them fully with dirt. Get the fairest and largest kinds of roots for planting. Keep the beds entirely clean from weeds. They may be cut the third year from the seed; and in cutting the plants, cut them obliquely about an inch below the surface. Cover the bed, if convenient, annually, in the fall with stable manure two or three inches thick; in the spring dig it with a dung fork about six inches deep, and rake the bed clean. These directions will almost insure success. If you desire early asparagus, secure a warm and sheltered spot. Some persons recommend, as asparagus is a maritime plant, the application of salt to the bed. A small amount mixed with the manure or scattered upon the bed would probably be beneficial. Asparagus well cooked, is one of the earliest and best of vegetables.

Manufacture of Paper.

Mr. Dierecy, a paper manufacturer of Ghent, has discovered that the refuse ends of asparagus make excellent paper, at half the expense of paper from rags; and that a still greater economy is obtained by mixing the pulp of asparagus with that of the beet root —*Eng. paper.*

Insurance against Damage to Standing Crops by Hail storms.

In France, and some other countries of the continent, companies for the Insurance of Agriculturists from loss through the destruction of standing crops by hail-storms have long been established, and have proved of great utility. In England, happily, our ripening harvests are not so frequently exposed to injury from such causes, but, nevertheless, it is the part of prudence to guard against even improbable danger, when the cost is trifling. Men do not insure their houses from fire because they *expect* a visitation from the devouring element, but simply as a measure of wise precaution against a *possible casualty.—New Farmer's Journal.*

Feeding Cattle on Carrots.

To the Editor of the Doncaster Chronicle.

Carlton Hall, Feb. 9, 1842.

Sir—Noticing a question in your last week's Chronicle, on Feeding Cattle on Carrots, being a means of bringing on the Opthalmia, I beg to say, we have been in the practice of feeding cattle with carrots very freely, more particularly milch cows, and have never had any thing of that disease amongst them, generally being very healthy, and I certainly consider them very healthy food for cattle and horses. Whenever they are amiss I generally order them a few carrots.

I am, sir, your obedient servant,

W. BRADLEY,

Steward to R. Ramsden, Esq.

N. B. I wish to further observe, I have never found anything to produce so sweet milk and butter as carrots.

Crater in the Sun.

Something extraordinary is at this moment passing in the sun; a sort of crater is perceived in it, which emits clouds of smoke that spread over a portion of its surface like an enormous moveable spot.—*Brussels paper.*

Wood's Plough.

With the general aim of the subjoined remarks we entirely concur; and we are in the same situation as to a knowledge of the grounds on which the decision of the Court rested as the writer is. An entirely different impression from what he seems to have in this matter has been given to us; as we learnt from one of the counsel engaged in the cause, that it was decided on its actual merits, and on the ground, which the Jury at least supposed to have been made out, that Wood was not the original inventor of the improvement on which his patent depended. We should with extreme reluctance do his memory the slightest injustice; and should be very glad if some of our correspondents would set us right in the case —*Ed.*

For the New Genesee Farmer

The late decision of the Supreme Court at Canandaigua, or rather the reports of that decision may induce many to regard the inventor of Wood's Plough in a different light from what he justly merits. Not being present nor having seen a full report of the trial, I cannot judge so well as some others, but I understand the patent was chiefly set aside on the ground of legal technicalities, and not because Wood was not in reality the inventor. So far as he is in *real equity* entitled to the thanks of his country for the great benefit he has conferred upon it, cannot be affected by testimony of hasty observers, given entirely on memory of thirty years standing, which there is every reason to believe is founded in mistake, or by the fact that he delayed one year in getting a patent. No one denies that it was by his perseverance and talent that the cast iron plough was introduced into general use, and that this, together with the great improvement he made in it, has been the means of effecting a greater revolution in the agriculture of the United States than all the improvements in other agricultural implements and machines for the last twenty years put together. At the time he obtained his patent, no one thought of denying his right to it; but instead of this, his opponents endeavored to show that his plough was of *no value*. But as soon as he had triumphed over this opposition, and its real worth could be no longer doubted, his fellow-citizens commenced depriving him of the advantages he had thus obtained with so much labor and expense, with a very few exceptions, and the rest of his life was one ineffectual struggle to maintain what he supposed the law of his country had really given him.

The history of American Inventors, almost without exception, affords but a melancholy picture. Robert Fulton brought successfully into use a machine which has indeed conferred wonderful advantages upon the country and the world; yet he was opposed on every hand, and attempts were by no means wanting to deprive him of the honor of the invention, by showing the prior claims of others—but who doubts to whom the right belongs? Eli Whitney, by the construction of the cotton gin, conferred wealth on the Southern States to the amount of millions on millions; yet his life was a constant succession of vexations and disappointments in maintaining the validity of his patent; and so great was the opposition he had to encounter, and so little relief could he get from courts of law, that on one occasion he found it almost impossible to prove that his machine had ever been used in the state, while one could at that moment be heard within a short distance of the court house door. Yet it is doubtful, considering the constant and multifarious uses of the plough, if even the steamboat and cotton gin together, have conferred nearly the real benefit on the country, which the cast iron plough has done.

These remarks are not made from any selfish motives, as the writer is in no wise interested in the matter however remotely, but merely from a desire to have justice done to the memory of a man who, instead of abuse, deserves the lasting thanks of all his countrymen.

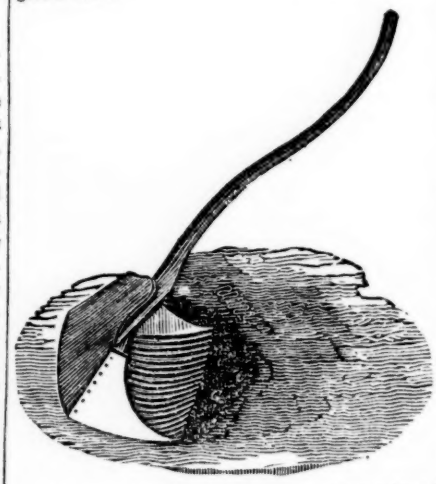
A CITIZEN.

Cranberry Rake.

(Extract from a letter.)

"In your March number article, "Cranberries" is mentioned a Rake by which a man can gather 50 or a 100 bushels of Cranberries per day. Such a rake would be of great value here, and I hope you will procure a drawing or description of it, that will enable us to make it." J. M. L.

The Cranberry Rake which he inquires after, is a very simple instrument, made in a form of which we give a view.



It has curved teeth about fourteen inches in length made thin and set so closely together that the berries will not escape through them, and sides with a board about the thickness of a shingle or ¼ of an inch. The teeth are made of hickory. We give the dimensions from mere sight and not measurement. They are for sale at the excellent and extensive Agricultural Ware House and Seed Store of Messrs. Jos. Breck & Co., Boston. The price cannot be much, but we do not know what it is.

On Ploughing and Fallowing for Wheat.

DEAR SIR:—I perceive that the subject of summer fallow is again attracting among our farmers, serious attention, and well it may—for the loss of the use of wheat land for the half of the time is a serious drawback upon the farmers profits—and that is not his only loss in consequence—the sun shining upon the naked surface of the land, during the hot summer months seriously injures it—and a continued use of the practice, would after a few years entirely ruin it. But fortunately nature ever mindful of the improvidence of man—sends forth upon the surface various vegetable productions, which serve as a carpet for the protection of the soil—even weeds do some good for that purpose.

Summer fallows and the loss of the land in consequence, and a remedy therefor, has for a long time attracted my attention and observation, and some practical operations have materially assisted me in the investigations.

Of all the operations of the farmer, ploughing is first in importance, and unless it is performed in the best possible manner, no very large crop need be expected; and the inquiry is abroad, cannot a good crop of wheat be obtained by once ploughing the ground, and that too after the crop has been taken off, either by hay or pasturage. I think it can be done, provided it is properly managed. But this is certain, that if a farmer undertakes the course with a common plough, one span of horses or one yoke of oxen, and it is turned up rather shallow, as that strength of team necessarily must do—with the greater part of the furrows set up edgewise, instead of being laid flat and his furrows so narrow, that no animal can walk straight forward in one without reeling out, sometimes on one side and then on the other, the plough following the cattle, sometimes in the right place, but oftener in the wrong, to the great discomfort of the ploughman as well as his team—that no crop of wheat can be expected with such management—the wheat will be choked under that kind of ploughing with very foul stuff, and the little wheat you get will not pay for the labor expended—and with such ploughing as we see frequently about the country, it is indeed a wonder that a crop of wheat is ever obtained even after three such ploughings.

No ploughman with the best of ploughs can make good work on grassy land unless there is sufficient width of furrow for the animal to walk in it steadily and with ease to himself.

But the grand question is, what must be done to insure a good crop after hay or pasturage with but one ploughing? And on smooth land as most of the land now is, by repeated fallowing? To accomplish so desirable an object, the first thing necessary, is to obtain a plough of sufficient capacity to turn a furrow at least ten inches deep and fifteen inches wide, and turn it flat over, if twelve inches deep and eighteen inches wide so much the better—and team strong enough to draw it that will give an abundance of earth above the sod to be pulverised, and be prepared for a large crop of wheat.

A gauge wheel to the plough is not only convenient but useful in such ploughing—the extra expence attending it, over that of common and narrow furrows is not so great as would appear at the first look, to cut as much at two furrows as you otherwise would at three furrows, will be found nearly to make up the difference in the expense of the two modes.

I cannot hardly tell why; but the first time the ground is managed in this way, a good crop is generally obtained, but not a very large one—whether it is owing to its not receiving a proper degree of pulverization the new parts of the sod not being sufficiently divided, I cannot say, although it must be rich enough, from what most people may have observed in making excavations. But the second time the operation is gone through with, and ever after if rightly managed, a large and heavy crop may be expected, with but a light expence in preparing the ground—for less strength of team will do the ploughing from what it took the first time.

I am fully of opinion that the land to be kept up good and not allowed to deteriorate and to be the most profitable to the farmer in a long run, ought not to be put into wheat oftener than once in three years—be thickly seeded with grass seed the next spring after sowing, a fine lot of after growth will probably be obtained in the fall after the wheat is off—the following year seeded principally with clover, with a small proportion of other grasses, and well plastered, an abundance of hay and pasture may be obtained; the next year the best of hay may be cut from it, or pastured if preferred—and the same season again ploughed and sown with a prospect of a first-rate crop—and if manure is liberally made and saved on the farm and applied to the hoed crops, regularly to each part of the farm until each part of the farm obtain its share of the manure, the cultivator will find his farm in high order—and it will be his own fault if his pockets are not well supplied. One-third of a good wheat farm managed in this way, may be sown to wheat every year, and more stock kept upon it, than can be kept on any exclusive grazing farm that can be found in this country. I am respectfully sir.

Yours &c. THOMAS TUFTS.

Le Roy, July 9, 1842.

The two following letters ought to have appeared in the June number of the Farmer, but did not reach us seasonably. We hope they will attract the attention which they deserve; and should be very happy to hear from the writers of them as often as they find it convenient to favor us. Our friend W. B. will assuredly give the desired information respecting Tomato Figs.

Various Inquiries.--Stearine from Lard and Oil from Corn Meal.

Mr. Colman—It is with pleasure I acknowledge the great satisfaction as well as instruction I receive from reading your invaluable paper. Your April No. is particularly gratifying, and is calculated to fill the mind with a deep interest, particularly the notice you have taken of the Report of the Commissioner of Patents, Mr. Ellsworth. But I could wish that some of your correspondents would make themselves responsible by signing their names to their communications. Much more confidence, I think, would be placed by your readers in communications thus sustained, and the editor would be troubled with none but such, as the authors at least considered worth printing. A plain, simple statement of all the facts relating to the subject, is what is wanted, and if that is fortified by a responsible name, so much the better. No words (unless explained) should be made use of but such are to be found in common school dictionaries, for our farmers are not all brought up at the feet of Gamaliel.

In the last No. of your paper, is a communication signed "W. B." headed "Tomato Figs,' describing their valuable and luscious qualities, and stating them to be within the reach of almost every man, and stating also, that in their preparation the medicinal qualities of the fruit were concentrated. Very well, so far, so good. But why stop here? Why not tell us *how* to prepare the "Tomato Figs"? He would then have done us a real service, and for one, if on trial I had found he had told us the truth, I would have hailed him as a benefactor. But I hope he will take up the subject again, and tell the whole story, and, by way of setting a good example, put his name to it.

I mention these things, not for the purpose of carping or finding fault, but to show that we farmers want facts more than speculation. We want truth, the whole truth, and if possible, nothing but the truth upon subjects communicated to us. An imperfect or erroneous statement of facts, sometimes injures the circulation of an Agricultural paper more than if the space occupied by it had been left blank.

Stearine from Fixed Oils, or Oils obtained from the seeds of Plants.

"The chemical nature of soap has of late years "been elucidated by the labors of M. Chevreul. "This chemist has found that fixed oils of fats are "not pure proximate principles, but consist of two "substances, one of which is solid at common tem- "peratures, while the other is fluid. To the former "he has applied the name of Stearine (suet) and to "the latter Elaine (oil). Stearine is the chief ingre- "dient of suet, butter and lard, and is the cause of "their solidity, whereas oils contain a greater pro- "portional quantity of elaine, and are consequently "fluid. These principles may be separated from one "another by exposing fixed oil to a low temperature "and pressing it when congealed, between folds of "bibulous (absorbing) paper. The stearine is thus "obtained in a separate form, and by pressing the "bibulous paper under water an oily matter is pro- "cured which is elaine in a state of purity."—*Turner's Elements of Chemistry, 4th American Edition, from 3d London Edition, Philadelphia*, 1832. *p.* 485.

Query.—Is or is not this process the same with that practiced in Alton, Ill., for extracting Stearine from the Oil of the Castor Bean, of which candles is made?"

Again, Stearine from Lard.

"The method of preparing stearine and elaine "from the vegetable oils has been already described "(page 485) and the same process which originated "with M. Braconnot, is also applicable to hog's lard. "This process by which M. Chevreul obtains these "principles, is by treating hog's lard in successive por- "tions of hot alcohol. The spirit in cooling deposits "the stearine in the form of white christaline needles, "which are brittle and have the aspect of wax, fuse "readily when heated, and are insoluble in water. "The alchoholic solution, when evaporated, leaves "an oily fluid which is elaine."—*ibid, p.* 544.

Here are two methods of procuring Stearine from Lard, of which, according to Mr. Ellsworth's report, candles are made worth 25 or 30 cents per pound, and one by which the same substance is obtained from vegetable oils for the same purpose. Whether either of them is the best that can be devised, remains to be seen. I hope we shall hear more on the subject.

But the subject in Mr. E's. report, or so much of it as you have noticed in your paper, appears to me to be the most extraordinary, and if the results of Mr. Webb's experiments and the deductions drawn from them by Mr. Ellsworth are not deceptive, will undoubtedly prove of great importance to the people of the Northern and Western parts of the United States.

Mr. E. does not give us particulars, but says "a minute account of these experiments can be furnished if desired." I hope you will desire it, and also publish it. Let us have facts; there is still immense room for facts in the science, yes, *science* of Agriculture. We have not yet learned even its first rudiments.

Oil from Corn Meal.

I am informed that Oil from Corn Meal is obtained by a mercantile firm in this state to a very considerable extent. I am told they are largely in the distilling business, and purchase large quantities of corn and obtain the oil from the meal while in a state of fermentation, by skiming. The meal is afterwards distilled, by which operation, as my informant said, the oil they saved was clear gain above that of other distillers. I presume this is the company to which Mr. E. refers in his report, as wishing for the privilege of supplying the light houses on the Lakes with oil.

Our fruit trees are now in full blossom, and the earliness of the season keeps the owners in constant fear that a frost may come and disappoint their best hopes. The man who can devise some cheap method, within the reach of common farmers, whereby orchards could be protected from early frosts, would deserve well of his country. It is a subject which I hope your correspondents will take into consideration.

Yours &c.

J. CROCKER.

Wooster, Ohio, 1842.

Mr. Colman—In your May number of the Genesee Farmer I discovered an article headed "Sugar from Indian Corn and Stearine from Lard." On reading the article I was much disappointed in not receiving any information on the method of obtaining Stearine from Lard. For the past two months I have devoted some time and pains to the investigation of the best method of obtaining stearic, margaric and oleic acids, and stearine and oleine from lard and tallow. The method which I found to be the best for obtaining the above acids from lard and tallow, is this: boil the fat in water for four or five hours, with a sufficient quantity of lime to form an earthy soap. During this process, the elements of the fat are so arranged as to form the acids, which combine with the alkaline earth and form with it their respective salts. These salts or earthy soap is decomposed in a large quantity of water by sulphuric acid; the acids being thus liberated, rise to the top of the water, which, when cold, is to be taken off, shaved fine, and then subjected to strong pressure, when the oleic acid will run off in a substance resembling oil, and leaves the stearic and margaric acids in the press, a substance very much resembling spermaceti, which, when made into candles, I found to be disposed to melt and run down; this, however, might be owing to its not being sufficiently pressed, as the press which I had was not very good.

If the process which you referred to in your last number is any thing like the foregoing, it is the forementioned acids that are obtained by it and not the stearine and oleine, as you there stated. The stearine and oleine are obtained by a different process. I have tried several experiments for the purpose of obtaining them, but as yet am not satisfied with the results. From what investigation I have made on the subject, I think I can soon satisfy myself with a process for obtaining them.

My object in writing to you is to obtain information on the subject. If you have a pamphlet on the subject you can spare, I wish you would send me one. If not, be so good as to write me those things that are practical. Yours &c.

JOHN McLEAN.

Jackson, Michigan, 1842.

P. S. The process which I have given you in part in this letter, was patented in England in the year 1829. J. McL.

We have sent the pamphlet of the National Agricultural Society to J. McL., and hope it has been received.

Cattle Shows, Fairs, and Ploughing Matches.

We subjoin a notice of the times of holding the several Agricultural Fairs, which come within our knowledge, within the district where our paper principally circulates, and shall keep it in until the times arrive. We shall be obliged to the Secretaries of the different Agricultural Societies in New York, Ohio, New England and Canada, if they will give us (post paid) the notices of their respective fairs.

New York State Fair,	Albany,	Sept.	28 and 29.
Monroe County "	Rochester,	Oct.	13 and 14.
Ontario " "	Canandaigua,	Oct,	12 and 13.
Genesee " "	Batavia,	Oct.	20 and 21.
Wayne " "	Palmyra,	Sept.	5 and 6
Livingston " "	Geneseo,	Oct.	4 and 5.
Oneida " "	Rome,	Oct.	11 and 12.
Seneca " "	Waterloo,	Oct.	20 and 21.
Tompkins " "	Ithaca,	Oct.	6 and 7.
Onondaga " "	Syracuse,	Oct.	5 and 6.
Jefferson " "	Watertown,	Sept.	15.
Cayuga " "	Auburn,	Oct.	12 and 13.
Oswego " "	Oswego,	Oct.	5.

CANADA.

Durham, Bowmanville, Oct. 18.
Northumberland, Grafton, Oct. 12th.

Over-Production.—It would seem that whatever can be produced by the steam engine power-loom and other improvements in machinery, has been generally, and in some articles of manufacture, sadly overdone in Europe and the United States; but this only adds to the farmer's comfort and wealth, as whatever depends solely on the hands, the plough, or the team, is not depressed *pro rata* in price and demand. When I see a farmer's wife exchanging a pail of butter, a basket of eggs, and a badly skimmed cheese, for calico and muslin enough to clothe all her children, while her husband stands by complaining of hard times, and contending that the dealer shall add thread and tape gratis, I am ready to exclaim with the Musculman, "God is just: he gives to the rich man only one belly."

Extraordinary.—Three hundred large Hogs, brought from Kentucky by way of New Orleans, were offered for sale last Monday at Brighton, Mass They remained unsold. What next?

New Wheat is selling at 50 cents per bushel in Cincinnati.

From the Mark Lane Express for February.

Comparative Condition of the English and French Laborers.

To the Editor of the Mark Lane Express:

SIR—As at this moment all Englishmen are occupied with anticipated alterations in the corn laws, the relative modes of existence of the British and foreign labourer are often compared. I am aware that no man understands better than yourself the comforts or the wants of the farm servant in England; but as, during your sojourn and travel on the continent, I think you did not visit the West of France, give me leave to point out the situation of a day laborer in that country (say Department de la Mayence). He earns twenty-two sous a day, 11d., (unfed); his ordinary food consists of black bread made of buck wheat, and a soup composed of salt and water, in which a few cabbage leaves have been boiled with a little grease—of this he eats three times a day; on Friday a certain quantity of buck wheat flour is boiled into a kind of paste and eaten, seasoned with salt. On Sunday, *sometimes*, he has a little bacon, but fresh meat (excepting a bit of liver or the inside of a sheep) he does not eat, nor does he taste wheaten bread. His general beverage is water, sometimes, when at a good house, he gets a little cider water of the most piquant description. A woman earns four sous a day, and her food, which is soup such as I have before described, and sour milk eaten with black bread. The man's dress in summer is a coarse linen jacket, trowsers, and shirt; the hemp with which they are made has been grown in his garden, spun by his wife, and woven by a neighboring weaver; that used for the outer garment is dyed blue, and the shirt is left unbleached; he wears no stockings, a red or grey woolen night-cap covers his head. In winter the same, only substituting homespun wool for hemp, and a wisp of straw in his sabots to keep his feet warm; three pairs (of these last) per annum, at eight sous a pair, keep him well shod. He possesses a hat, pair of shoes, socks, and a neckcloth, but these he only wears on Sundays and fete days. His dwelling is stone built, a ground floor; the window place is iron-barred with a strong inside shutter, and totally unglazed; the door is divided in two, the upper half and the shutter are generally left open for light; a bed or two in the corners, on wooden frames, and the floor is of earth.

This is not an exaggerated statement, but one drawn from real life. My only wish is that when the comforts of the foreign laborer are vaunted, the real state of the case may be known by those interested in the welfare of our own men, but whose pursuits or occupations have not permitted them to make personal observation. There is a noble emulation now existing in England for the improvement of agriculture, and it is not a compliment when I say that you have lent a powerful aid to its progress. That England could feed her people, and have to spare, I have no doubt: but to accomplish that great good, her millions of acres of yet unreclaimed wastes must be given up to spade husbandry, her pastures must be ploughed, and her cattle be stall-fed. Forgive my trespassing so long on your time.

Yours, &c., C. S.

POLAND.

BY MAJOR TOCHMAN.

Money is very scarce in all parts of Poland, the laboring class is in a wretched condition, and uneasiness is to be seen even in the magnificent palaces built by their fathers. Many a Pole, who possesses thousands of acres of land, and who has thousands of bushels of wheat in his granaries, finds himself often under difficulty to pay taxes and arbitrary contributions. Consequently every thing that the laborer and the soil produce is very cheap—whilst the foreign articles of all kinds are rare and very dear; the importers of the last being obliged to pay heavy duties, *to maintain their new commercial policy.*

In the last two or three centuries before the dismemberment of Poland, copper money was almost unknown in Poland—silver and gold were in circulation—the people scarcely knew any other money than dollars and ducats, (a dollar was of the same value as the American; a ducat is a gold piece worth $2,50); now a Polish florin *(zloty poliski)* which is equal to one shilling of the State of New-York, is divided into thirty very small pieces of copper, called '*grorze*,' and for one such piece of copper, that is to say, for the thirtieth of a shilling, they have a loaf of bread sufficient for the breakfast, dinner, and supper of an American gentleman. The price of wheat is from 18 to 25 cents a bushel; rye, barley, and oats, sell at two thirds or a half of the price of wheat. In some parts of Poland, incorporated with Russia, these articles may be got at a much lower price; whilst for coffee and sugar they must pay from 18 to 25 cents a pound, and for tea from 75 cents to $3.

The consequence is, that the foreign articles, even of the first necessity, as the above are used by a very few families, in proportion to the population of the country: scarcely one person in a hundred is rich enough to use coffee and ten in Poland, since it has been dismembered. An owner of two or three hundred acres of well cultivated land, seldom makes use of any article which does not grow on his soil. As to the laboring class, they never see any. The produce of the soil feeds and clothes them.

A common laborer gets in Poland from 6 to 12½ cents per day; a mechanic seldom more than 25 cts; a female servant, in the country, has from 37 to 75 cents per month; a male servant from 50 cents to $1 per month. In the cities, the wages of servants are about one fourth higher. The clothing of the laboring class of both sexes, is comfortable, but very poor, made of linen and woolen cloth, and furs of the country. The whole dress of a country female per annum costs from 3 to $6; the dress of a laboring man from 4 to $8, including shoes and boots. A pair of shoes used by a laboring female sells from 18 to 37 cents; and a pair of boots of a laboring man, from 37½ to 75 cents. As to the clothing of a lady, this costs nearly as much as in the United States; the cotton and silk stuffs, the ribands and other articles necessary to make ladies' dresses, being almost of the same price throughout Poland as here. It is the same with regard to the dress of a gentleman,—only that the ladies' shoes and the gentleman's boots are cheaper in Poland: such shoes as we pay here $1.25 for, are selling in Poland for from 25 to 37½ cents; for such boots as cost here 7 or $8, they pay from 2 to $3. But to get boots for $8, they must sell from 12 to 15 bushels of wheat; and the dress of a lady, worth only $20, will cost them from 80 to 100 bushels of it. A farmer, who has 2,000 bushels of wheat for sale, can buy a silver watch for himself, but not one for his wife; while had he, before the dismemberment of Poland, sold 2,000 bushels of wheat, neither he or his lady and half a dozen of daughters would look at gold watches, not set with diamonds, or at least, with rubies.

The cattle, flocks, and herds, are also very cheap. A milch-cow sells at from 2,50 to $8; an ox for slaughter from 10 to $30. A horse, such as we pay here $70 for, is worth in some parts of Poland about $25; in the parts of the country incorporated with Russia, such a horse is worth only from 7 to $12. A common sheep sells from 18 cents to one dollar. Those called 'merino sheep,' introduced from Spain, are sold from 20 to $100.

Wind Power Machine.

MR. HENRY COLMAN—I have this day received the enclosed letter from Captain Glover, giving me a description of his Wind Mill; but as he observes in his postscript, "but little insight can be had from the description." Yet I am persuaded that the view of the model for one minute by any mechanical genius, would impress its importance on the mind over all other forms for Wind Power.

I am respectfully, yours &c.

O. WHYTE.

Brookline, June 25, 1842.

Roxbury, Mass., June 24, 1842.

I now will describe, as well as I can, my Wind Power. It is adapted to be placed on the roof of a building, consequently occupies no room wanted for other purposes; it consists of 4 arms, to which is attached the wings, composed of thin boards, cross lined with the same, and fastened together with rivets or nails, and is hung to the arms with staple hinges about ⅔ by ½, and is supported by a spring, of which there are several sorts. The one I have adopted is somewhat like that of the main spring of a watch, wound round the arm, and extended to the wing, so that when a greater force of wind strikes the sails than is required, this spring gives way and diminishes the surface in exact ratio to its force; hence it cannot revolve with any more speed in a gale than in (as we sailors say) a royal breeze. It tends to the wind like a weathercock; has no canvass or cloth for sails; no reefing, no furling of sails; requires no attendance, and by a simple brake is made to stop. A spindle, 2 bevel cogs, and shaft, are all that is necessary. The latter is brought down through a pump log to the loft where the drum or cog-wheels is to be attached, as the case may require.

For grinding corn a simple cog wheel will give motion to as many run of stones as can stand around it, and be thrown out of gear at pleasure. For sawing, &c., a drum can be used with bands. When not wanted in motion for any considerable time, the wings can be hooked or pinioned back. The power is in proportion to its size, and if found too much or too little in its operation, it can be regulated by extending or contracting the spring out or in on the wing; out to increase, and in to decrease the power. The arms or wings fly to leeward. The fan or wind board is about twice the width of the wings, secured to the frame of boards on each side, similar to a barn door. Any carpenter can make the whole, except shaft, spindle and cog wheels, which are of iron.

P. S. You can get but little insight by this, the only way is to see the model.

From the Boston Daily Advertiser.

The last Monthly Chronicle contains a statistical account recently published, by which it appears that the agriculturists of France possess the following number of animals:

Ox and Cows		6,681,000
Merino Sheep	766,310	
Common Sheep	30,845,852	
		31,612,162
Horses and Mules		1,656,000
Pigs		3,900,162
		43,849,162

In Mr. McCulloch's statistics of the British Empire, published in 1839, the number of oxen and cows in Great Britain is estimated at 5,220,000

Sheep and Lambs in England	26,148,463	
do do Scotland	3,500,000	
		29,648,463
Horses, probably including Mules		1,500,000
Pigs, the number not stated by McCulloch, but are estimated by another writer, including those of Ireland, at		18,000,000
		54,368,463

By the census of 1840 there were found in the United States

Neat Cattle	14,971,586
Sheep	19,311,394
Horses and Mules	4,345,669
Swine	26,301,298
	94,919,622

Supposing the foregoing estimates of the number of those animals in Great Britain and France to be correct, it follows that there are in the United States upwards of three millions of neat cattle more than in both Great Britain and France together. France has upwards twelve millions of sheep, and Great Britain upwards of ten millions more than the United States.

If to the number of horses in France used for agricultural purposes be added, three hundred and forty four thousand, for the cavalry and other uses, it gives for that kingdom a total of two millions—these added to the fifteen hundred thousand in Great Britain fall short of the number in the United States by more than eight hundred and thirty-five thousand. The Swine in the United States exceed those of France, Great Britain and Ireland together by about four million four hundred thousand.

From the above it will be seen, that with the exception of sheep, there are many more of each of the other animals in the United States than in France and Great Britain together. Q.

The subjoined stanza was penned in an Album at Niagara by Lord Morpeth, on his late visit to the Falls. Every generous mind, and every friend to the two countries must cordially join in the prayer.

"Oh, may the wars, that madden in thy deeps
There spend their rage, nor climb the encircling steeps.
And 'till the conflict of thy surges cease
The Nations on thy banks repose in peace."

Protecting Home Industry.

Mr. Editor—I observe, by the freedom of your own remarks as well as by the conflicting sentiments of correspondents admitted to your columns, that you are no enemy to the free discussion of all questions connected with the general prosperity. On the subject of a tariff, I see two articles in your Farmer for June—one of S. W., the other of Old Humphrey of the Genesee. Plain working folks like me, don't know much about "the theory of a Protective Tariff and retaliatory duties," or indeed about theories of any kind; and if it would not be deemed rude, I would venture to say to S. W. that, after looking over several of his well polished communications, a number of us have come to the conclusion that if he were a practical working man, he would find less time, and perhaps have less disposition to theorize. The last I heard of him, he was with Zelin in the Saloon, contrary, as I understand it, to express regulation. But if I was you, I would not make a fuss about it—better let him be—for that, of all places in your boat, is the very spot for him.

The first statement made by S. W. which I judged material to the support of his anti-tariff theory, astonished me, for it was indeed news to me, and I think will be to you, that New England, the great workshop, has never advocated a high tariff. I have all along supposed that she cried out as loudly, as unitedly, and I may add more effectually, for a tariff than Pennsylvania; and that she has steadily and perseveringly pursued a policy forced upon her by non-intercourse and embargo measures, and in which she was induced to embark much of her capital to supply the demand created by these measures, and rendered apparent by the war which shortly succeeded them. And why is it that factories, not a few among her cities of factories too, are closed, and the hands unemployed? Why, but because she cannot stand competition with the pauper labor of the old world—because the protection which her manufactures have enjoyed, and under which all have lived and many of them flourished, is about to be withdrawn? And does not New England know all this—and knowing it, has she not sought from G nment the boon of that protection that ensures her prosperity? I cannot doubt it; for the Yankees, I take it, are among the last men on earth, to let any blessing slip by them unenjoyed because unasked. But near the close, S. W. says he is in favor of "a tariff ample for the purposes of revenue, framed with such discrimination as will favor both revenue and protection to our home industry." If Pennsylvania, "in the dark hour of her distress," asks for any higher tariff than this, I never heard of it, and you are welcome to say that I think her very unreasonable. But says S. W., "I always go for encouraging domestic industry and building up a home trade, as a certain market for the farmer." Them's my sentiments, Mr. Editor, and though S. W. and I may not have agreed entirely by the way, yet so cordially do I concur in his closing remarks that we part the best of friends.

At odd spells, between ploughing and pulling stumps, I have attentively read your friend Old Humphrey, and am by no means sure that I understand him. He speaks approvingly of a tariff for revenue only, and immediately adds that it should be imposed with such discrimination as to protect such of our manufactures as most need it. Now so far as I understand, this is about all any body wants. And yet in the next paragraph he seems to speak of a protective tariff, as evil only, and that continually. I cannot understand this, and without designing to censure the old gentleman, I must say I think him a trifle metaphysical, according to the Scotchman's definition of it,—"when ye hear a man talking and canna understand what he means—and when he that's talking does'na understand what he means himsel, that's metaphysics."

Not long ago I heard a laboring farmer address a meeting of laborers on the subject of protection to home industry. He started with the position, that the habits of business that contributed to the thrift and prosperity of a family, had no necessary connexion with its number; and consequently that those prudential rules and economical habits that would create and secure the prosperity of a family of five or seven, were in general equally applicable to our great American family of seventeen millions. Every economist knows at the end of every year whether he can make the two ends meet. If, after disposing of the produce of his labor to the best advantage, he finds that he still owes for articles purchased, and that the balance of trade is thus against him, or in homely phrase, that he has bought more than he can pay for, he is forced to the conviction that he can recover from the embarrasement and prevent its recurrence *only by selling more* or *by buying less*—or best of all, *by doing something in both ways*. For so surely as he continues to buy more than he sells, and year after year runs behind hand, so surely is he bankrupt. When the farmer can pay the shoemaker in the produce of his farm he had probably better make the exchange than make his own shoes: but if he require in payment that which the farmer does not make or cannot produce out of his labor, he had better sit in the house where he can do without shoes, than buy them with the certainty that they will be worn out in travelling the road to inevitable ruin. These positions, it was argued, had an application to every variety of human intercourse, and were as true of families as of individuals, and of nations as of families.

Protection to manufactures, by affording hi; her wages, would draw off from a redundant agricultural population, so many as would equalize production and consumption, thus rendering each one's labor more profitable—for it is clear, if you make consumers of those who are now producers of food, that agricultural labor will be better paid. Protection to home industry will produce on the currency those beneficial results which are confidently predicted of National Banks, Sub-Treasuries and Fiscal Agencies. So long as we continue to buy more than we sell, so long will there be a constant stream of specie running out of the country—for specie is the only article with which we at the North can pay foreign debt. Cherish home industry, and you will have no call to send specie abroad, after existing debts are paid off. Divert this exhausting drain—dam up this ceaseless current, and retain it with its constant accumulations in the country, and you have the only safe and reliable basis of a sound and healthful paper circulation. The country is thus rendered truly free and independent—a position demanded not less by our interest than our national honor. Such were some of the views of my friend, and I thought he hit the nail on the head.

Yours truly,

June 27, 1842. JOHN FARMER.

From the Salem Gazette.

Leather Business of Danvers.

The following statement has been obtained for our use, and we take pleasure in laying before our readers the statistics of so industrious a community as that of Danvers. The well known accuracy of the compiler imparts to it perfect authenticity.

A statistical account of the Shoe and Leather business in the town of Danvers for the year 1841, compiled from the returns made by committees appointed in each department of the business, who reported specially what was done by each person engaged in it.

1. *Boots and Shoes*, manufactured,—924,000 pairs.

Estimated value, when ready for market, $650,000

40 per cent of this is labor applied—1255 males are constantly employed, and 946 females.

2. *Tanning and Currying*—373,800 sides of leather.

10 per cent of labor applied in the process of tanning,—20 per cent of labor applied in the process of currying upper leather. A large proportion of the leather tanned here is also curried. 328 males are constantly employed in this business.

The Real Estate, consisting of tanneries and mills used in this business, is valued at $123,000. 6500 cords of bark are used in the tanneries, estimated at $8 per cord, when delivered at the yard, $50,000, 9-10ths of this is the result of actual labor applied. The transportation of the bark from Maine to Massachusetts employs 15 vessels of 80 tons each, and 60 men. The transportation of hides from South America employs 5 vessels of 200 tons each and 50 men. In addition to the above, citizens of this place are concerned in tanneries in Maine and Vermont, from which they receive leather ready for the market, of the value of $200,000

3. *Manufacture of Skins*—150,000 dressed annually.

Estimated value when ready for the market, 90,000

40 per cent of this is labor applied,—44 males constantly employed.

Gross amount of the value of materials brought to market annually by our manufacturers, $1,732,900

The whole number of persons employed as stated above is 2639. Supposing one third of the nett proceeds to be applied as a compensation for their labor, this would give about $214 to each person, not by any means an extravagant compensation for their labor. It is not pretended that the amount of capital employed is as large as the sum above stated; because some of the articles are twice estimated.

Such for instance is the case with the leather purchased by the currier of the tanner. It will also be remembered that a large part of the stock worked in the shoe factories is purchased in the New York and Philadelphia and Baltimore markets.

The foregoing estimates are the best *approximation* to the facts, that I have been able to obtain from an examination of the returns of men practically engaged in the business. Throughout it has appeared to me they were not disposed to overrate their business. A more sober, industrious, and mind-their-own-business class of people, than the manufacturers of this place, it will be difficult to find in any community.

I hope sir, that the above statements, hastily sketched, will be found a satisfactory answer to your inquiries. Very respectfully and truly yours,

Danvers, March, 1842 J. W. PROCTOR.

On the Effect of Carrots on Horses.

To the Editor of the Mark Lane Express:

Sir—In answer to a query in your excellent paper of the 10th inst., respecting feeding horses on carrots, I am unable to give your correspondent any lengthened experience on the subject; but since I have given my horses (twelve in number) carrots, I have not perceived any ill effects from them, neither have I ever heard the root accused of injuring horses' eyes before; but the chief reason of my replying to your correspondent, is to inform him that the parsnip, a root having great affinity to the carrot, is thought to have this effect, as he will perceive by the following quotations from Quayle's Agriculture of the Islands on the coast of Normandy, drawn up for the consideration of the late Board of Agriculture. Under the head, parsnip in the Island of Jersey, he says:—"Horses eat this root greedily, but in this Island it is never given to them, as it is alleged when kept on this food their eyes are injured." Again, in the island of Guernsey, he says:—"To horses, parsnips are frequently given, and have the property of making them sleek and fat; but in working, they are observed to sweat profusely. If new, and cut sufficiently small, no other ill effect results, except indeed, at one period of the year, towards the close of February, when the root begins to shoot; if then given, both horses and horned cattle are subject, on this food, to an inflammation in the eyes, and epiphora, or weeping; in some subjects perhaps producing blindness." Trusting the above extracts may prove interesting to your correspondent, I remain, &c,

January 24*th*. A Devonshire Farmer.

Agricultural Warehouse at Troy, N. Y.

Mr. Colman—To the farmer it is a source of honest pride to observe that his profession is certainly advancing to that pre-eminence to which it is entitled; a result produced in a great measure, no doubt, by the circulation of agricultural publications and the employment of able pens, sound heads, and patriotic hearts for its advancement. New and interesting experiments are making—valuable facts are published to the world—a stimulus is offered to exertion—and while the hands are hardening with honorable and successful toil, the mind is usefully employed, and the means for its gratification seem to keep pace with the taste for agricultural improvement. *Twenty years ago, few ever dreamed of seed stores or agricultural repositories. Now they are springing up at every important point; and a very great accommodation they certainly are to us, if properly conducted.

Mr. Henry Warren of Troy, extensively and favorably known as the maker of Miner's Patent Pump, has recently fitted up and furnished an agricultural warehouse on a very respectable scale. I have known him long and intimately. He is upright, straightforward, ingenious, practical, and to his character for probity, his persevering industry and good manners, is he alone indebted for his present standing.

Mr. W. wants the New Genesee Farmer and send the enclosed to pay for it, (pretty good evidence, is it not, that he is withal a discriminating, sensible man?) Will you do him and me the favor of noticing his establishment in your next paper, and of introducing him to the manufacturers of farmers' ware.

Your friend and constant reader,
JOHN McDONALD.

Salem, Washington Co., June 27, 1842.

We noticed in our last the new Agricultural Ware House of B F. Smith & Co., in Syracuse. We are happy to add the above notice of Mr. Warren's establishment in Troy, N. Y. His situation is on every account favorable, being a central point of business and resort for a large agricultural community. There is room enough and call enough for this establishment where he has placed it, and we cannot but wish him the most ample success.

* More than thirty years ago was commenced the agricultural Warehouse and Seed Store of Messrs. Newell, Fearing and Co., in Boston, which has since been maintained and is continued under the firm of Messrs. J. Breck & Co., second to none in the United States for its extent, the good workmanship of its articles, and its trustworthy management. With this establishment is and has been connected almost from its birth that useful and excellent publication the New England Farmer, now in its twenty-first year, tho' in the maturity of its character and talent "of age" even from its infancy, and an earlier pioneer in agricultural improvement.

Since that time have grown up and still flourish the seed establishment of Messrs. Hovey & Co., with some tools entirely worthy of confidence; the extensive and admirable implement and seed establishment of Messrs. Ruggles, Nourse & Mason in Quincy Hall; the valuable Plough establishment of Messrs. Prouty, Mears & Co., and the seed and tool firm of Messrs Breck & Wilkins, a thrifty scion from the old stock whose honor and good conduct may be safely relied upon; all in Boston.

Messrs Hovey & Co are the publishers of the Magazine of Horticulture highly worthy of the patronage of cultivators and amateurs for which as well as for any other of the agricultural publications in Boston we should be happy to take subscriptions.—Ed.

Howard's Ploughs.

We have received for exhibition two (different sizes) of the ploughs of Charles F. Heward of Hingham, Mass., which may be seen at the Seed Store of M. B. Bateham, in the Arcade. These ploughs have long been celebrated in Massachusetts and other parts of the United States. Without disparagement to any other plough, it may be said with truth, that in every respect these are among the very best ploughs ever put into the ground. They will be fully tested at the Agricultural Show; and if approved can easily be obtained on application at the above store.

ROAD OR DIRT SCRAPERS.

May be had at the Rochester Eagle Furnace. Price wood-ed, $5. Scrapers without wooding, $2,50.
June, 1842. A. J. LANGWORTHY.

To Correspondents.

The communication of our friend B. M. is accidentally omitted. The review of Gray's Agriculture is necessarily postponed. We regret both these cases; and several other valuable communications are necessarily deferred.

As to Zelia, we presume she is married and gone to housekeeping; and the long silence of our friend W. B. gives us no little concern for his health of body or of mind. Our last accounts left him in respect to the last particular in a bad way; and what effect the suggestion that Zelia is no more Zelia may have upon him, we are afraid even to conjecture. We advise to homoepathic doses of the elixir of hope. "There are as good fish in the sea, &c."

Flora's last communication has been exceedingly well received as its merits deserved. "One good turn deserves another." Therefore write again.

A stingy farmer.—Every farmer in this vicinity, save one, has now sold his wheat at 10 shillings the bushel: this man has held on for twelve shillings, or as much more as he could get—his conscience would not stick at five dollars. No man, when the price has fallen, feels worse than the man who has no wheat to sell, and an inconvenient mortgage on his farm. To comfort him, some of his neighbors commend his benevolence in keeping his wheat to fall on his own hands, rather than break down the millers. S. W.

Important Sale to Agriculturists.

IMPROVED SHORT HORN DURHAM CATTLE. On Thursday morning, 8th September, at 10 o'clock, will be sold, at the exhibition ground of the Philadelphia Agricultural Society, Rising Sun, on the Germantown Road. 3 miles from the city, a choice selection of splendid Durham dairy stock from the herd of James Gowen, Esq., of Mount Airy, consisting of imported cows, bulls, and calves from Dairy Maid, Pocahontas, Victoria, &c., and by the celebrated bulls Colostra, Prince of Wales, and Leander.

This sale will afford to breeders an opportunity of adding to their stocks thorough bred animals of high character and pure blood, and their diffusion into proper hands is a primary object in this sale, together with the necessity of a separation of the herd to prevent over close breeding.

Catalogues will be ready in due time, and the cattle may be examined at the exhibition ground two days previous to the sale. August 1.

DEATH TO INSECTS—A cheap and effectual remedy has at length been found for the vile slugs that annually infest the Pear and Cherry trees, and also for the numerous tribes of insects flies lice &c. that commit such depredations on the plants and vegetables in our gardens. It is the use of WHALE OIL SOAP. See the Magazine of Horticulture. vol. vii. page 245, and the New Genesee Farmer, vol ii, page 118.

Mode of Using—Dissolve one quart of the soap in two quarts of boiling water—mix this in twelve gallons of cold rain water, and sprinkle the tree or plants, so as to wash both sides of the leaves. Repeat the application once or twice and the cure will be complete. The best instrument for the purpose is a garden syringe, which costs at the seed store $3. The Whale Oil Soap is also for sale at the seed store—price only 25 cts per quart.
August, 1842. M. B. BATEHAM.

Ruta Baga and Turnip Seed.

A NEW supply of genuine imported purple top Ruta Baga Seed,—also a full assortment of English and Scotch Turnip Seeds, for sale at the Rochester Seed Store and its agencies.

WHITE DUTCH CLOVER SEED, a fresh supply, received at the Seed Store.

SILK WORM EGGS, of the large Sulphur and Peanut varieties, for sale at the Seed Store $1 per ounce.
June 1. M. B. BATEHAM.

HUSSEY'S REAPING MACHINE.

Having had frequent communications from Western farmers, to know if I could not deliver my Reaping Machine in Rochester for $120; I would inform them that I have two now in Rochester, which can be had for that price, by calling on Ebenezer Watts & Co. Orders for others at the same price will be duly noticed.
THOMAS R. HUSSEY.
Auburn, N. Y., June, 1842.

Rochester Plough Manufactory.

AT No. 90 State street, may be found a good assortment of ploughs of the most approved patterns, such as the Genesee, Cayuga County, Gibson's, Wood's, Rich's Side Hill and Shovel plough, also, Cultivators, Revolving Horse Rakes, Road Scrapers, and Canal Wheel Barrows.
June 1. P. D. WRIGHT & CO.

FOR SALE.

ONE THRASHING MACHINE, Hall's patentt large size, the horse power nearly new, and the whole in perfect condition.

Also, one English Straw Cutter of a very superior construction, to work by hand or horse power.

One Lumber Waggon, Fanning Mill, Seed Dresser, Root Slicer, Barrel Churn, two two horse Carriages, three sleighs, one single horse Cutter and some other farming utensils. The whole will be disposed of very cheap.
Apply to THOMAS WEDDLE.
August 1842. No. 66 Exchange street Rochester

PLOUGHS.

A NEW AND SUPERIOR KIND OF PLOUGHS, (two sizes) designed for breaking up summer fallow, may be purchased at the Rochester Eagle Furnace,—price $6 and $7 each. Wood and other produce taken in exchange. A. J. LANGWORTHY.
June, 1842.

Garden, Field, and Flower Seeds.

THE subscriber having established a large Seed Garden about one mile from the city, on Monroe street, would say to his old customers and others, that he is prepared to execute orders for seeds at wholesale or retail, on the most reasonable terms. By his long experience in the business in the Shaker Seed Garden at New Lebanon, and a determination to offer no seeds but such as are raised under his immediate inspection or imported from the most respectable establishments in Europe, and their vitality carefully tested, he therefore confidently expects to give the most ample satisfaction to all who may favor him with their patronage.

Orders for Fruit and Ornamental Trees, Flowering Roots, and Green House plants, promptly executed in their season.

Selection made by the proprietor when requested.
Rochester, June 1. C. F. CROSMAN

ROCHESTER PRICES CURRENT.

CORRECTED FOR THE NEW GENESEE FARMER. AUGUST 1, 1842.

WHEAT,	per bushel,	$	75 a	$ 88
CORN,	"		38	44
OATS,	"		20	25
BARLEY,	"		38	
RYE,	"		44	50
BEANS, White,	"		75	88
POTATOES,	"		18	25
APPLES, Desert,	"		50	75
FLOUR, Superfine,	per bbl	5.25		5,38
" Fine,	"	4,50		
SALT,	"	1,25		
PORK, Mess,	"	7,00		7,50
" per 100 lbs		3,00		
BEEF,	per 100 lbs	3,50		
POULTRY,	per lb		5	6
EGGS,	per dozen,		9	10
BUTTER, Fresh	per pound		10	12½
" Firkin,	"		8	9
CHEESE,	"		5	6
LARD,	"		6	8
TALLOW, Clear,	"		8	
HIDES, Green	"		4	4½
PEARL ASHES,	100 lbs	5,00		
POT,	"	4,75		
WOOL,	pound,		22	28
HAY,	ton,	5,00		7,00
GRASS SEED,	bushel,	1,00		1 25
CLOVER SEED,	"	5,50		6.00

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